

# WEBER STATE UNIVERSITY BUILDING #4

## STEAM, CONDENSATE, & DOMESTIC

## WATER REPLACEMENT

DFCM PROJECT NO. 06052810  
OGDEN, UTAH



State of Utah—Department of Administrative Services

### DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

4110 State Office Building / Salt Lake City, Utah 84114 / 538-3018



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#### DFCM DESIGN AND CODE CRITERIA

(Fee A.E. Attach and fill in applicable data for each drawing submittal)

Applicable Codes:  
International Building Code Year 2003  
Planning & Design Criteria to Prevent Architectural Barriers for the Aged and the Physically Handicapped. Year 2003  
International Mechanical Code Year 2003  
International Plumbing Code Year 2003  
ASHRAE/IES Energy Code Year 2001  
National Electrical Code Year 2002

A. Occupancy and Group : N/A

Change in Use : Yes No ☒ N/A

B. Type of Construction (Circle) N/A

C. Location on Property : F.R. Ext. Walls (Hrs.):

D. Occupancy separation required (Hrs.):

Sprinklered: Indicate Yes or No

Stories : 1 or multiple N/A

a. Actual Area<sup>2</sup> (ft )

b. Basic allowable area :

c. Allowable Area Increase due to side yards: N

d. Side yard area increase (ft )

Accumulative sub-total (b+d):

Sprinkler: area increase (x3 single)

(x 2 multi)

e. Total Allowable Area for a single story:

x 2 for multi-story building:

f. Ratio = a/e

(Actual divided by allowable)

E. Fire-Resistive Requirements (Hrs.): (1 Hr., 2Hr., 3Hr., 4Hr., N. H.T.)

Exterior Bearing Walls: N/A

Interior Bearing Walls: N/A

Exterior Non-bearing Walls: N/A

Structural Frames: N/A

Partitions - Permanent: N/A

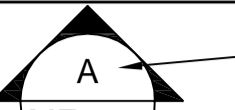
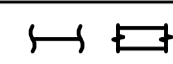

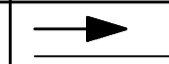
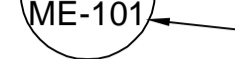
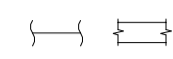
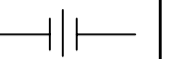
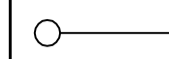
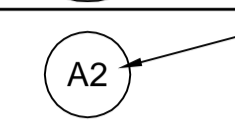
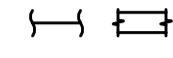
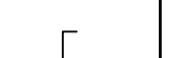
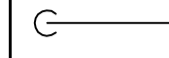
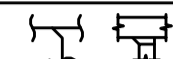
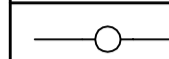
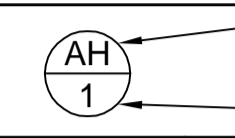
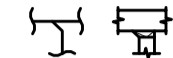
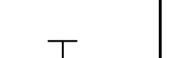
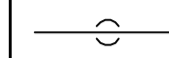
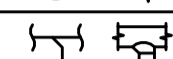
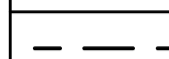

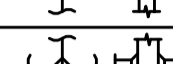
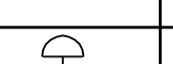
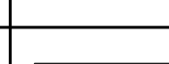
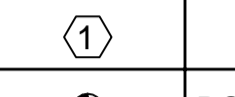
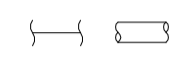

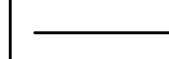
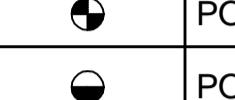

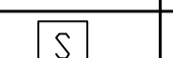
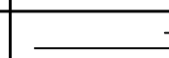

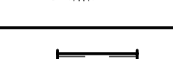
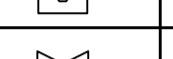
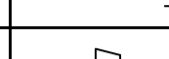
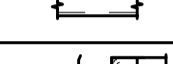
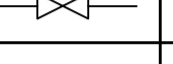
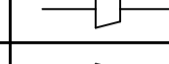
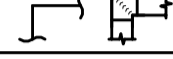
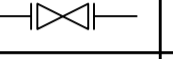
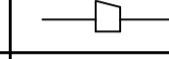
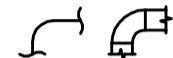
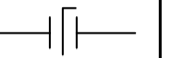
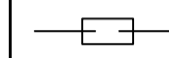
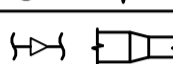
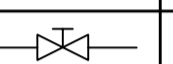
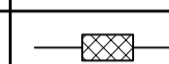
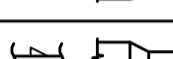
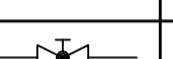
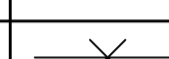
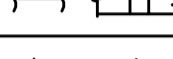

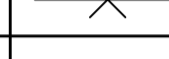
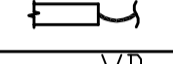

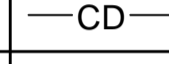


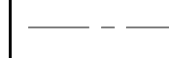


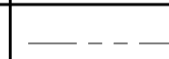




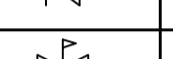
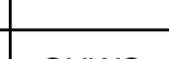



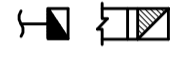
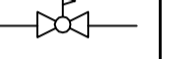

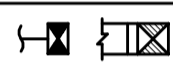
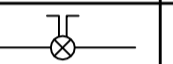
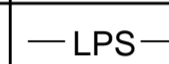
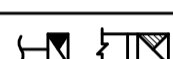
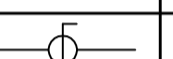
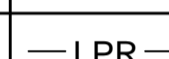
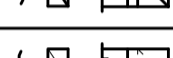
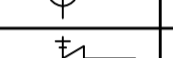
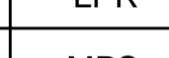
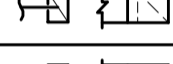

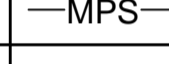
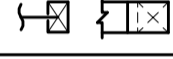

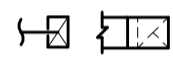


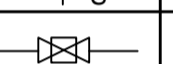
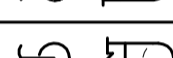
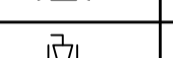
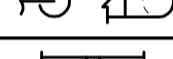
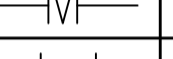

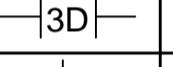
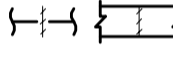
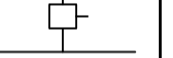
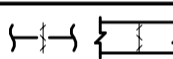
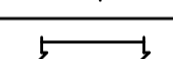

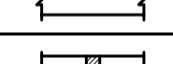




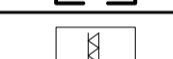

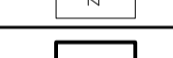
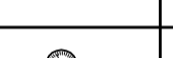

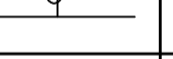


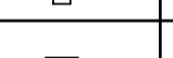

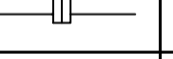
(OCCUPANCY SEPARATION - N.A.)

Floors - Ceiling Floors: N/A

Roofs - Ceiling Roofs: N/A

Exterior Doors and Windows: NR

Shaft Enclosures: N/A

MECHANICAL LEGEND											
SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY			AIR SIDE			WET SIDE			WET SIDE CONT		
		SECTION LETTER DESIGNATION			EXISTING AIR DUCT TO BE REMOVED			PUMP			PITCH DOWN (SLOPE)
		SECTION DRAWN ON THIS SHEET			EXISTING AIR DUCT TO REMAIN			UNION			ELBOW UP
		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION			NEW AIR DUCT			MANUAL ACTUATOR (BALL, BUTTERFLY, NEEDLE, ETC. VALVES)			ELBOW DOWN
					RECT. TO RECT. AIR DUCT TAKE-OFF						TEE UP
		MECHANICAL EQUIPMENT DESIGNATION EQUIPMENT ITEM DESIGNATION			RECT. TO RND. AIR DUCT TAKE-OFF			MANUAL ACTUATOR (GATE, GLOBE, S&D, OS&Y, ETC. VALVES)			TEE DOWN
					RND. TO RND. AIR DUCT TAKE-OFF						EXISTING PIPING TO BE REMOVED
		REVISION DESIGNATOR AND NUMBER			RECT. TAKE-OFF AT END OF MAIN			PNEUMATIC DIAPHRAGM ACTUATOR			EXISTING PIPING TO REMAIN
		KEY NOTE DESIGNATOR AND NUMBER			BURIED OR UNDER FLOOR DUCT			ELECTRIC MOTOR ACTUATOR			NEW PIPING
	POC	POINT OF CONNECTION			FLEXIBLE AIR DUCT			SOLENOID ACTUATOR			PIPE CAP OR PLUG
	POR	POINT OF REMOVAL			LINED DUCT			THREADED OR SWEAT VALVE CONNECTION			CONCENTRIC REDUCER
AFF		ABOVE FINISHED FLOOR			VANED ELBOW			FLANGED VALVE CONNECTION			ECCENTRIC REDUCER
AP		ACCESS PANEL			RADIUS ELBOW			BUTTERFLY VALVE			EXPANSION JOINT
CL EL.		CENTER LINE ELEVATION			CONCENTRIC DUCT TRANSITION			GATE VALVE			FLEXIBLE CONNECTION
INV. ELEV.		INVERT ELEVATION			ECCENTRIC DUCT TRANSITION			GLOBE VALVE - STRAIGHT PATTERN			ANCHOR POINT
GC		GENERAL CONTRACTOR			FLEXIBLE DUCT CONNECTION			GLOBE VALVE - ANGLE PATTERN			CONDENSATE DRAIN
MC		MECHANICAL CONTRACTOR			VOLUME DAMPER			MOTORIZED 2-WAY CONTROL VALVE		CW	CULINARY COLD WATER
CC		CONTROL CONTRACTOR			SUPPLY AIR DIFFUSER			MOTORIZED 3-WAY CONTROL VALVE		HW	CULINARY HOT WATER
EC		ELECTRICAL CONTRACTOR			RETURN AIR, FRESH AIR, AND TRANSFER AIR			CHECK VALVE			RECIRCULATED CULINARY HOT WATER
FPC		FIRE PROTECTION CONTRACTOR			CEILING MOUNTED EXHAUST FAN OR EXHAUST GRILLE		PRV	PRESSURE REDUCING VALVE		CHWS	CHILLED WATER SUPPLY
NIC		NOT IN CONTRACT			RETURN OR OUTSIDE AIR DUCT UP		PRV	PRES REDUCING VALVE W/ CHECK		CHWR	CHILLED WATER RETURN
NTS		NOT TO SCALE			SUPPLY DUCT UP		CBV	CIRCUIT BALANCING VALVE		LPS	LOW PRESSURE STEAM
C		COMMON			EXHAUST AIR INTAKE UP		BV	3 PIECE BALL VALVE		LPR	LOW PRESSURE STEAM RETURN
NC		NORMALLY CLOSED			RETURN OR OUTSIDE AIR DUCT DOWN		PRV	PRESSURE RELIEF VALVE		MPS	MEDIUM PRESSURE STEAM
NO		NORMALLY OPEN			SUPPLY DUCT DOWN		TRV	THERMAL RELIEF VALVE		MPR	MEDIUM PRESSURE STEAM RETURN
					EXHAUST DUCT DOWN		SRV	SAFETY RELIEF VALVE		HPS	HIGH PRESSURE STEAM
					ROUND DUCT UP			PLUG VALVE		HPR	HIGH PRESSURE STEAM RETURN
					ROUND DUCT DOWN			NEEDLE VALVE		PC	PUMPED CONDENSATE
					FLEXIBLE DUCT CONNECTION		TDV	TRIPLE DUTY VALVE			
					PARALLEL BLADE DAMPER			AUTOMATIC AIR VENT			
					OPPOSED BLADE DAMPER			MANUAL AIR VENT			
					FILTER BANK			STRAINER			
					COIL			STRAINER W/ PLUGGED BLOW OFF			
				AP	ACCESS PANEL		VTI	VENTURI			
					EXISTING EQUIPMENT TO BE REMOVED			PRESSURE GAUGE AND GAUGE COCK -WATER			
					EXISTING EQUIPMENT TO REMAIN						
					NEW EQUIPMENT			PRESSURE GAUGE AND GAUGE COCK -STEAM			
				MVD	MOTORIZED VOLUME DAMPER			THERMOMETER AND THERMOWELL			
				BD	BACKDRAFT DAMPER						
				TSTAT	WALL MOUNTED THERMOSTAT						
					WALL MOUNTED TEMP. SENSOR						
				HSTAT	WALL MOUNTED HUMIDISTAT			WATER TEMPERATURE SENSOR AND THERMOWELL			
				FSTAT	WALL MOUNTED FIRESTAT						
			SA		SUPPLY AIR			FLOW SWITCH			
			RA		RETURN AIR		PS	PRESSURE SWITCH			
			EA		EXHAUST AIR			TW			THERMOWELL
			OA		OUTSIDE AIR			TT			PRESS. & TEMP. TAP
			MA		MIXED AIR			IBT			INVERTED BUCKET STEAM TRAP
			FA		FRESH AIR			TT			THERMOSTATIC STEAM TRAP
			RF		RELIEF AIR			F&T			FLOAT & THERMOSTATIC STEAM TRAP
											DIRECTION OF FLOW

GENERAL NOTES:

G-1 MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING DRAWINGS BY OTHER DISCIPLINES AND SPECIFICATIONS.

A - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.

B - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.

C - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.

D - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.

E - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.

G-2 ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. ARCHITECT SHALL BE NOTIFIED IN WRITING PRIOR TO CHANGES.

G-3 CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.

G-4 THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCKOUTS OR CORE DRILLS THROUGH STRUCTURE.

G-5 THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION

G-6 C.F.M. LISTED IS ACTUAL AIR.

G-7 SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.

G-8 CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS, OR REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.

G-9 ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2003 EDITION OF THE IMC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

G-10 THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.

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PROJECT NAME & ADDRESS

WSU BUILDINGS  
# 4 STEAM,  
CONDENSATE,  
DOMESTIC WATER  
REPLACEMENT  
DFCM No. 06052810

OGDEN, UTAH

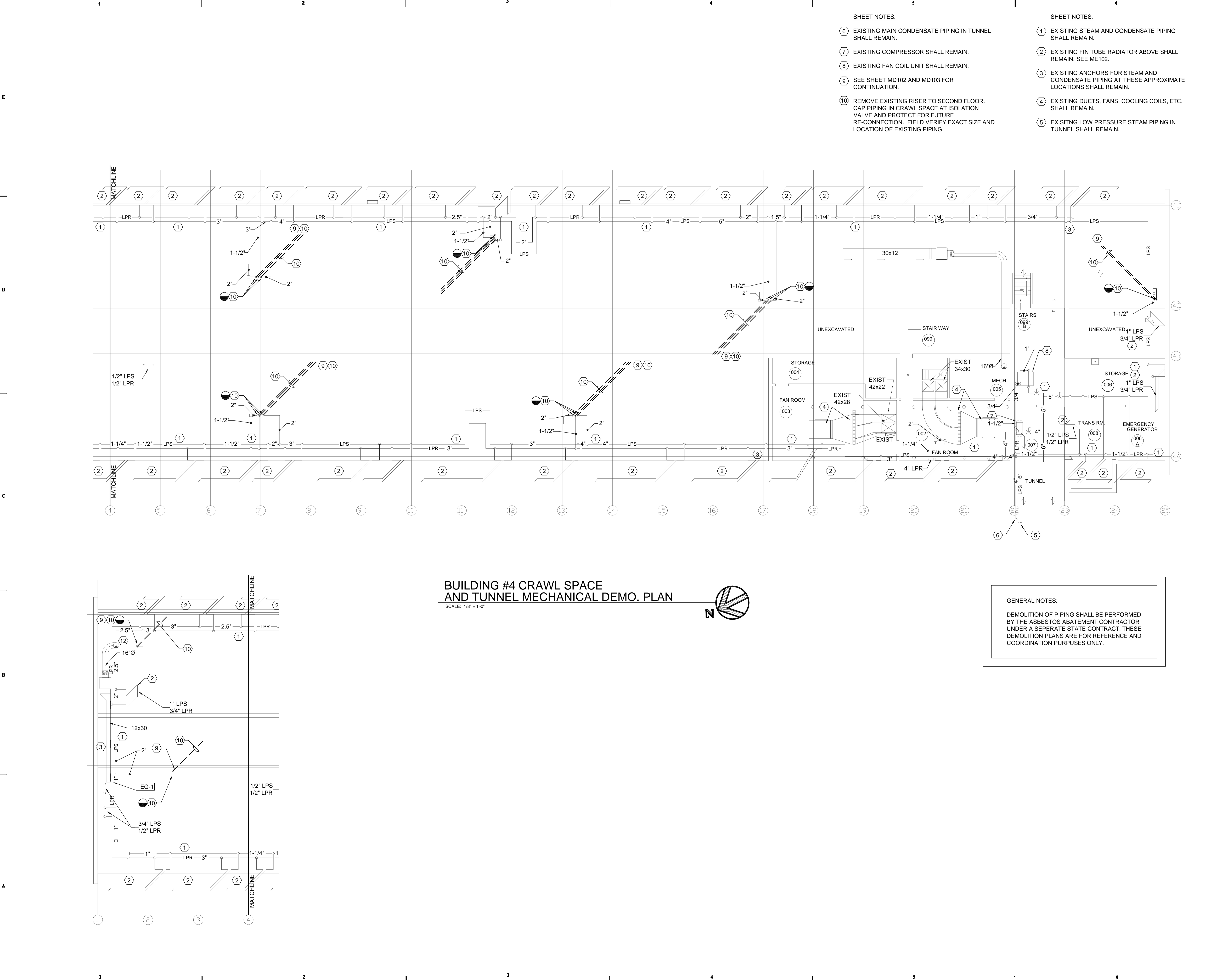
MARK	DATE	REVISION
CD	4/17	

PROJECT MANAGER:	VP
DRAWN BY:	STAFF
CHECKED BY:	SLW
DATE:	04/17/06
WHW JOB NO.:	06004
SHEET TITLE	

MECHANICAL  
GENERAL NOTES AND  
LEGENDS

SHEET NO.

M001



**State of Utah**  
Department of Administrative Services

**Division of Facilities**  
Construction & Management  
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**PROJECT NAME & ADDRESS**

**WSU BUILDINGS  
# 4 STEAM,  
CONDENSATE,  
DOMESTIC WATER  
REPLACEMENT**

**DFCM No. 06052810**

OGDEN, UTAH

MARK	DATE	REVISION
CD	4/17	

PROJECT MANAGER: WP

DRAWN BY: STAFF

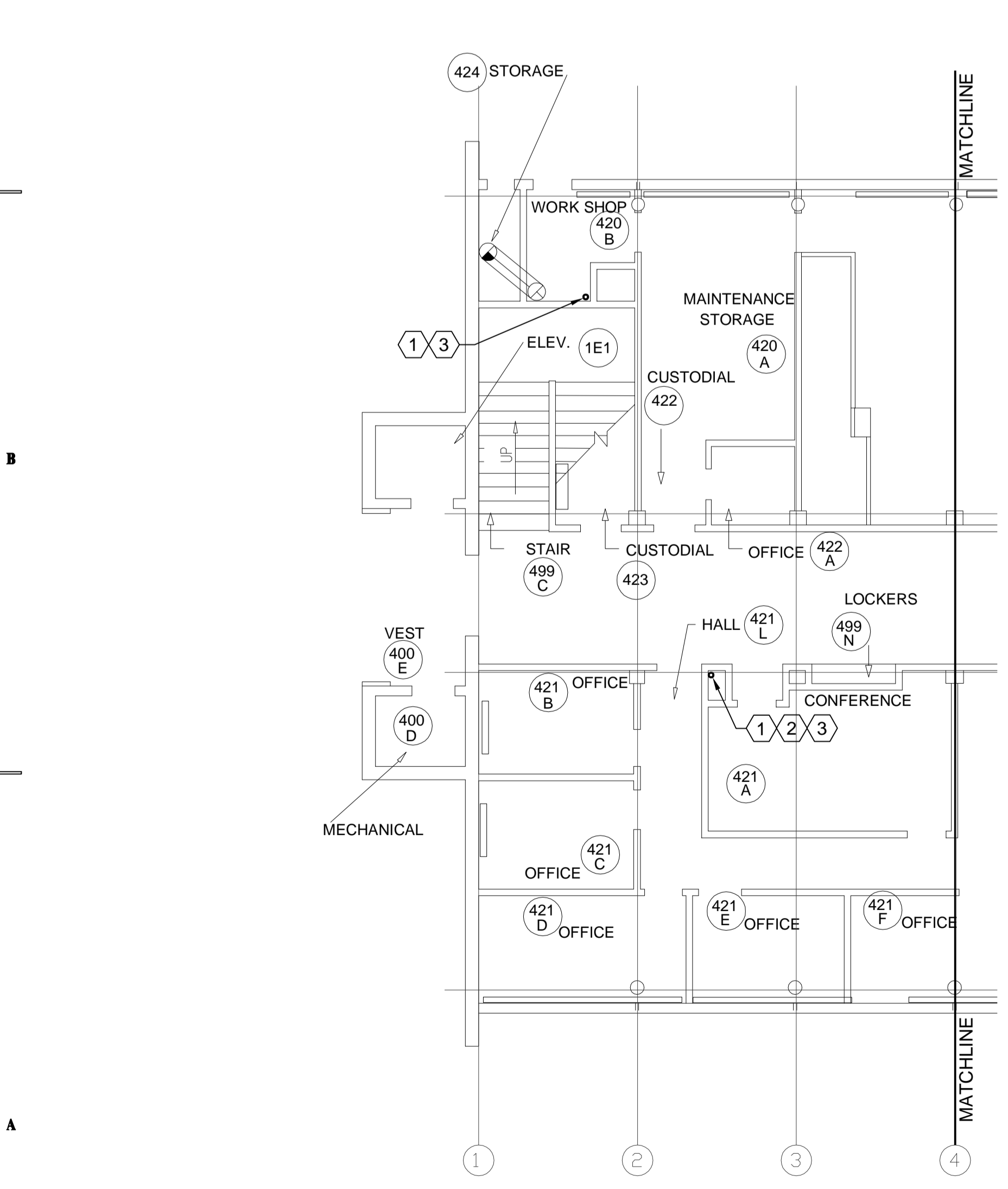
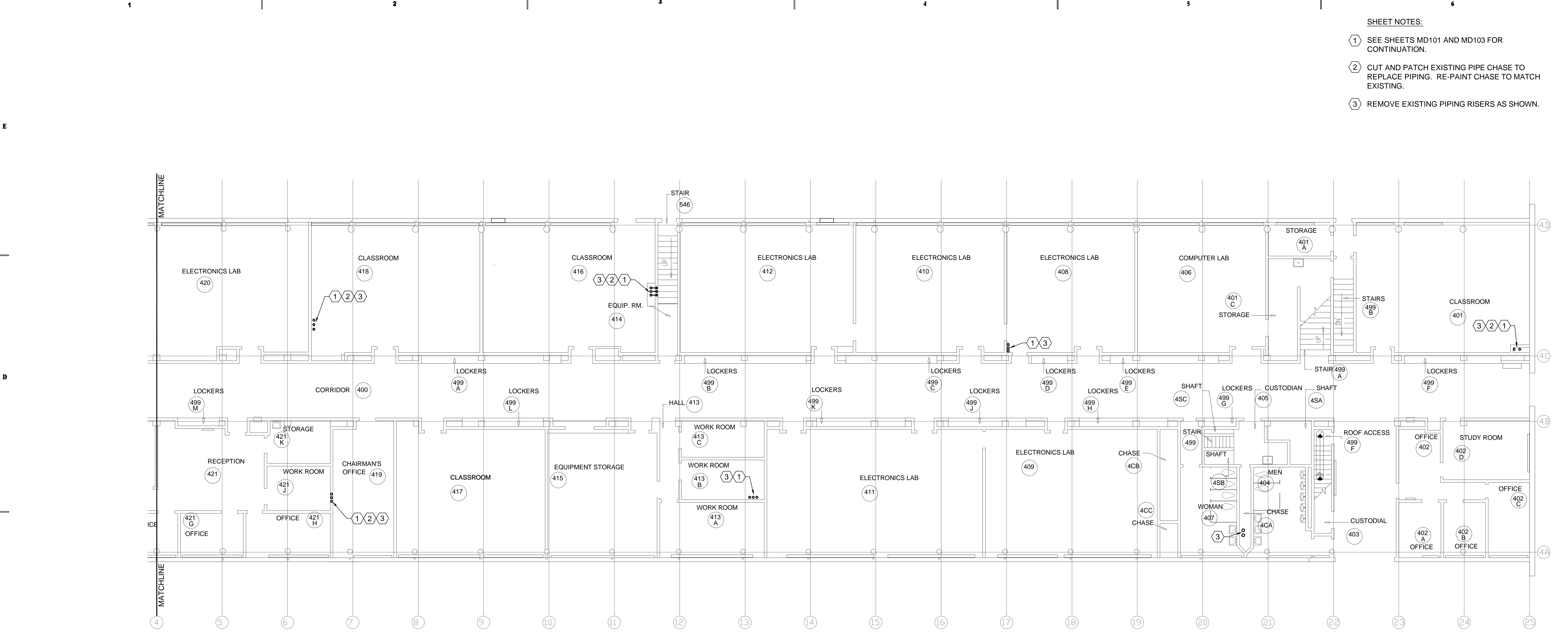
CHECKED BY: SLW

DATE: 04/17/06

WHW JOB NO.: 06004

SHEET TITLE: BUILDING # 4 CRAWL SPACE AND TUNNEL MECHANICAL DEMO PLAN

SHEET NO. MD101



**BUILDING #4 MAIN LEVEL  
MECHANICAL DEMO. PLAN**  
SCALE: 1/8" = 1'-0"

**GENERAL NOTES:**

DEMOLITION OF PIPING SHALL BE PERFORMED BY THE ASBESTOS ABATEMENT CONTRACTOR UNDER A SEPERATE STATE CONTRACT. THESE DEMOLITION PLANS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY.

- SHEET NOTES:**
- 1 SEE SHEETS MD101 AND MD103 FOR CONTINUATION.
  - 2 CUT AND PATCH EXISTING PIPE CHASE TO REPLACE PIPING. RE-PAINT CHASE TO MATCH EXISTING.
  - 3 REMOVE EXISTING PIPING RISERS AS SHOWN.

**State of Utah**  
Department of Administrative Services

**Division of Facilities**  
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1584 East 1300 South, Suite 200  
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**PROJECT NAME & ADDRESS**

**WSU BUILDINGS  
# 4 STEAM,  
CONDENSATE,  
DOMESTIC WATER  
REPLACEMENT**

**DFCM No. 06052810**

OGDEN, UTAH

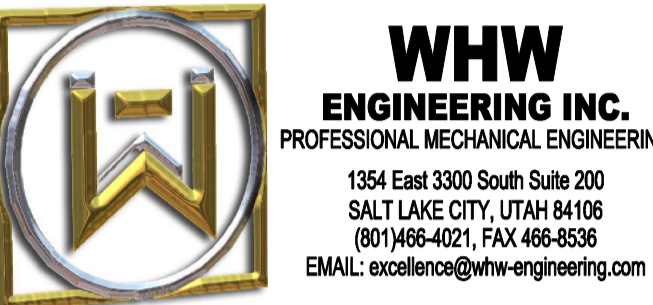
MARK	DATE	REVISION
CD	4/17	

PROJECT MANAGER:	WP
DRAWN BY:	STAFF
CHECKED BY:	SLW
DATE:	04/17/06
WHW JOB NO.:	06004

**BUILDING # 4  
MAIN LEVEL  
MECHANICAL DEMO.  
PLAN**

SHEET NO.  
**MD102**

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PROJECT NAME & ADDRESS

**WSU BUILDINGS  
# 4 STEAM,  
CONDENSATE,  
DOMESTIC WATER  
REPLACEMENT**  
**DFCM No. 06052810**

OGDEN, UTAH

MARK	DATE	REVISION
CD	4/17	

PROJECT MANAGER:  
VP  
DRAWN BY:  
STAFF  
CHECKED BY:  
SLW

DATE:  
04/17/06  
WHW JOB NO.:  
06004

SHEET TITLE

**BUILDING # 4  
2ND LEVEL  
MECHANICAL DEMO.  
PLAN**

SHEET NO.

**MD103**

SHEET NOTES:

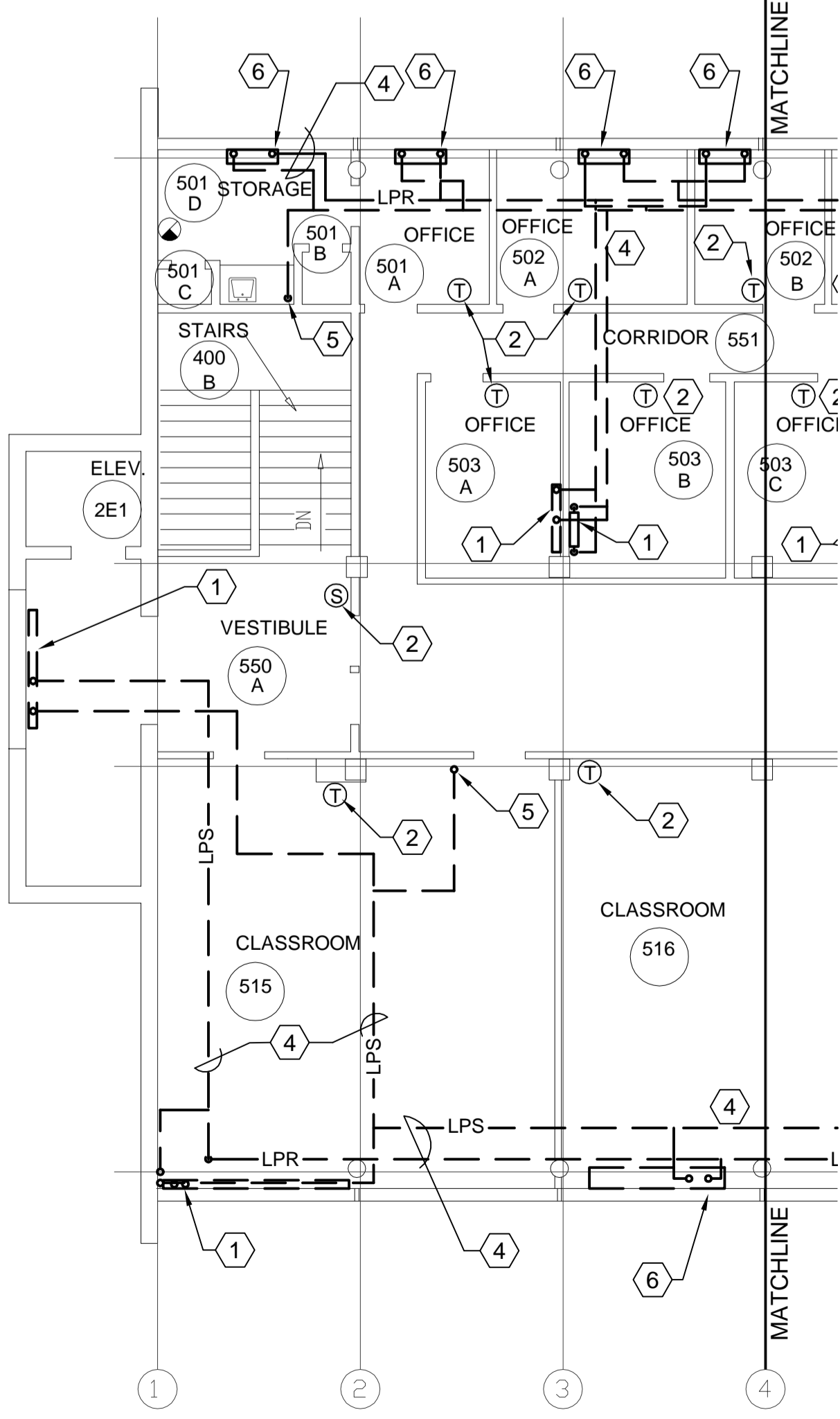
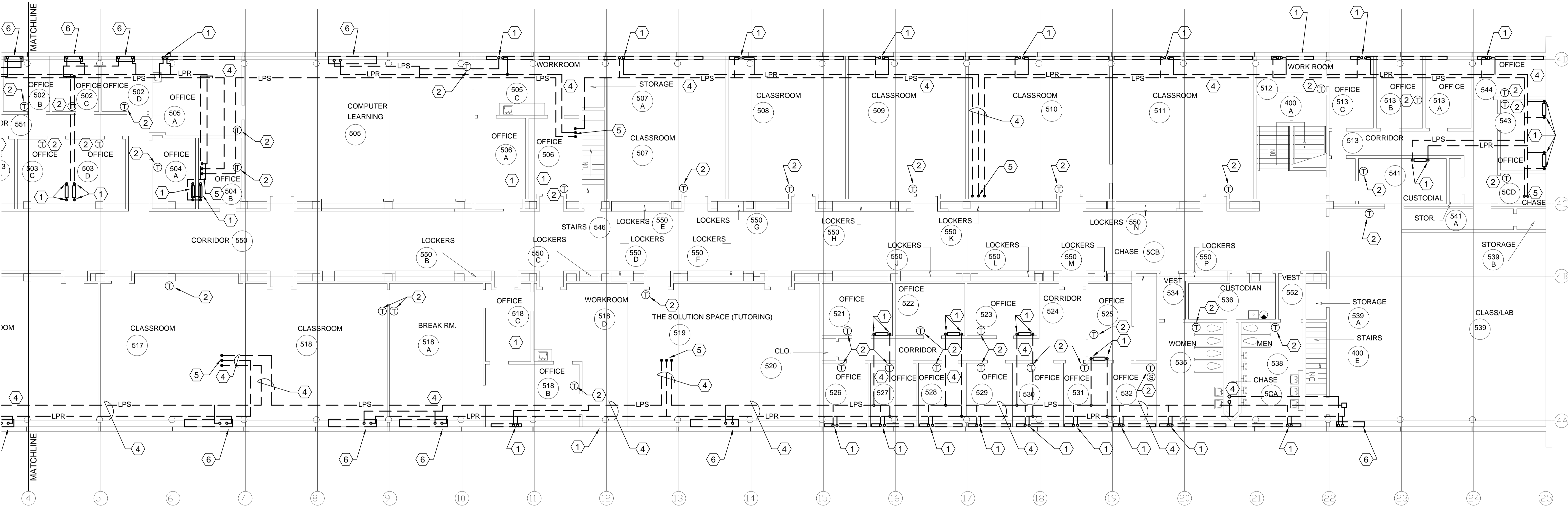
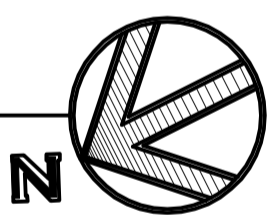
- 1 REMOVE EXISTING FIN TUBE CONVECTOR AND ASSOCIATED PIPING. PIPING SHOWN IS IN CEILING SPACE BELOW.
- 2 EXISTING THERMOSTAT SHALL REMAIN. VERIFY THAT THERMOSTAT AND CONTROL VALVE FUNCTION PROPERLY.
- 3 NOT USED.
- 4 REMOVE EXISTING STEAM AND CONDENSATE PIPING & SPECIALTIES INCLUDING HANGERS, INSULATION, TRAPS, VALVES, ETC.
- 5 SEE SHEET MD102 FOR CONTINUATION.
- 6 REMOVE EXISTING CABINET UNIT HEATER AND ASSOCIATED PIPING. PIPING SHOWN IS IN CEILING SPACE BELOW.

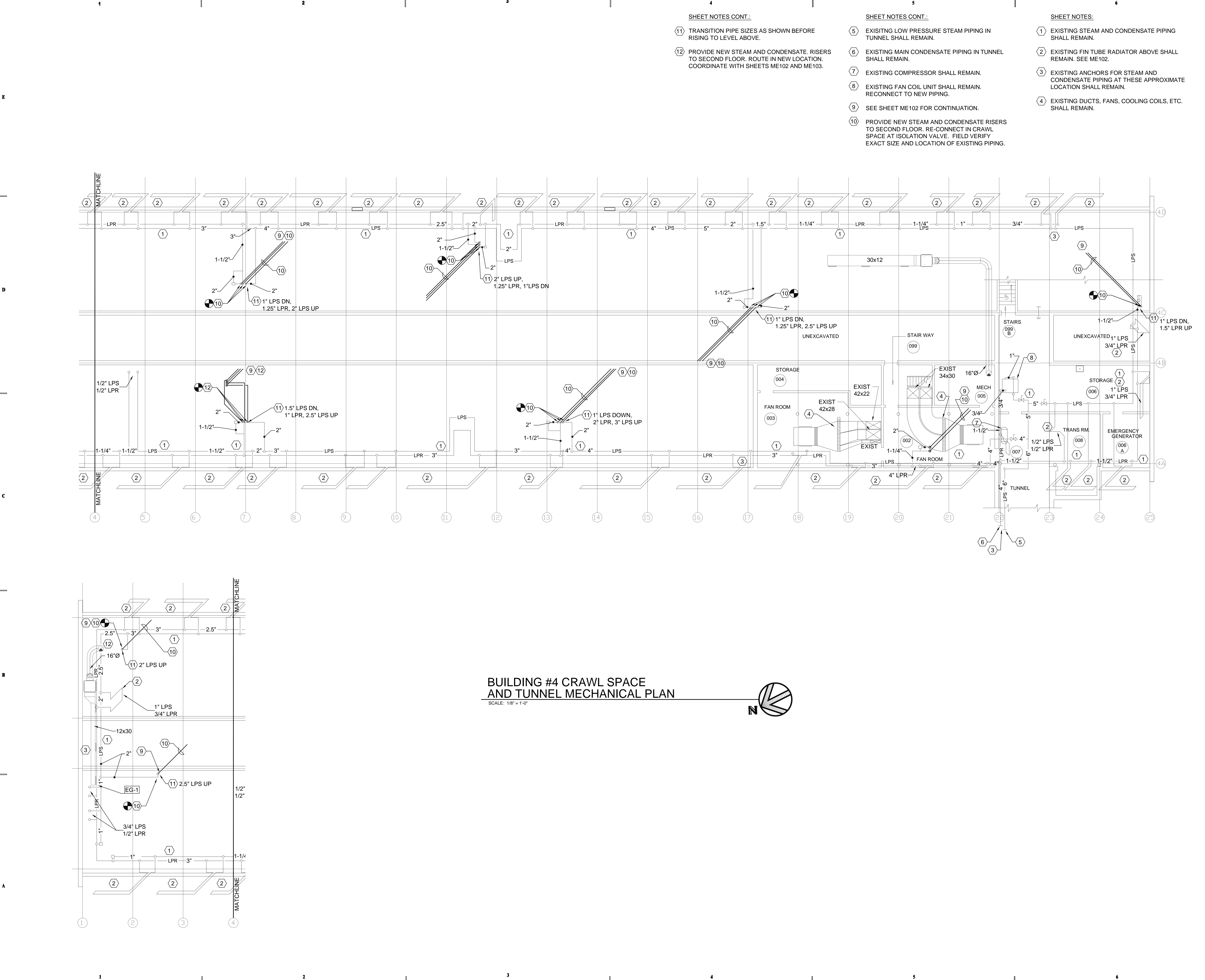
GENERAL NOTES:

DEMOLITION OF PIPING SHALL BE PERFORMED BY THE ASBESTOS ABATEMENT CONTRACTOR UNDER A SEPERATE STATE CONTRACT. THESE DEMOLITION PLANS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY.

**BUILDING #4 2ND LEVEL  
MECHANICAL DEMOLITION PLAN**

SCALE: 1/8" = 1'-0"





SHEET NOTES CONT.:

- (11) TRANSITION PIPE SIZES AS SHOWN BEFORE RISING TO LEVEL ABOVE.
- (12) PROVIDE NEW STEAM AND CONDENSATE RISERS TO SECOND FLOOR. ROUTE IN NEW LOCATION. COORDINATE WITH SHEETS ME102 AND ME103.

SHEET NOTES CONT.:

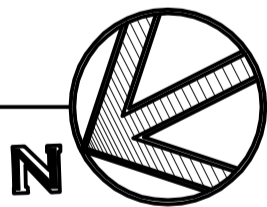
- (5) EXISTING LOW PRESSURE STEAM PIPING IN TUNNEL SHALL REMAIN.
- (6) EXISTING MAIN CONDENSATE PIPING IN TUNNEL SHALL REMAIN.
- (7) EXISTING COMPRESSOR SHALL REMAIN.
- (8) EXISTING FAN COIL UNIT SHALL REMAIN. RECONNECT TO NEW PIPING.
- (9) SEE SHEET ME102 FOR CONTINUATION.
- (10) PROVIDE NEW STEAM AND CONDENSATE RISERS TO SECOND FLOOR. RE-CONNECT IN CRAWL SPACE AT ISOLATION VALVE. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING.

SHEET NOTES:

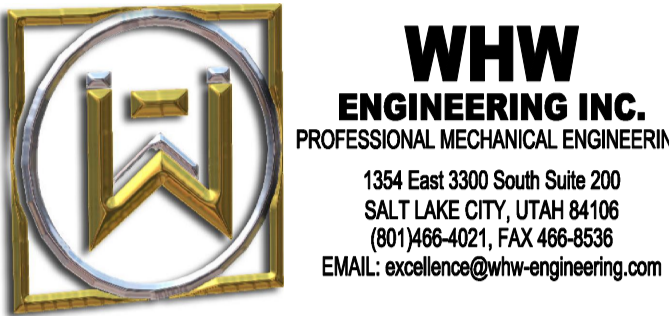
- (1) EXISTING STEAM AND CONDENSATE PIPING SHALL REMAIN.
- (2) EXISTING FIN TUBE RADIATOR ABOVE SHALL REMAIN. SEE ME102.
- (3) EXISTING ANCHORS FOR STEAM AND CONDENSATE PIPING AT THESE APPROXIMATE LOCATION SHALL REMAIN.
- (4) EXISTING DUCTS, FANS, COOLING COILS, ETC. SHALL REMAIN.

BUILDING #4 CRAWL SPACE AND TUNNEL MECHANICAL PLAN

SCALE: 1/8" = 1'-0"



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PROJECT NAME & ADDRESS

**WSU BUILDINGS  
# 4 STEAM,  
CONDENSATE,  
DOMESTIC WATER  
REPLACEMENT**  
**DFCM No. 06052810**

OGDEN, UTAH

MARK	DATE	REVISION
CD	4/17	

PROJECT MANAGER:

WP

DRAWN BY:

STAFF

CHECKED BY:

SLW

DATE:

04/17/06

WHW JOB NO.:

06004

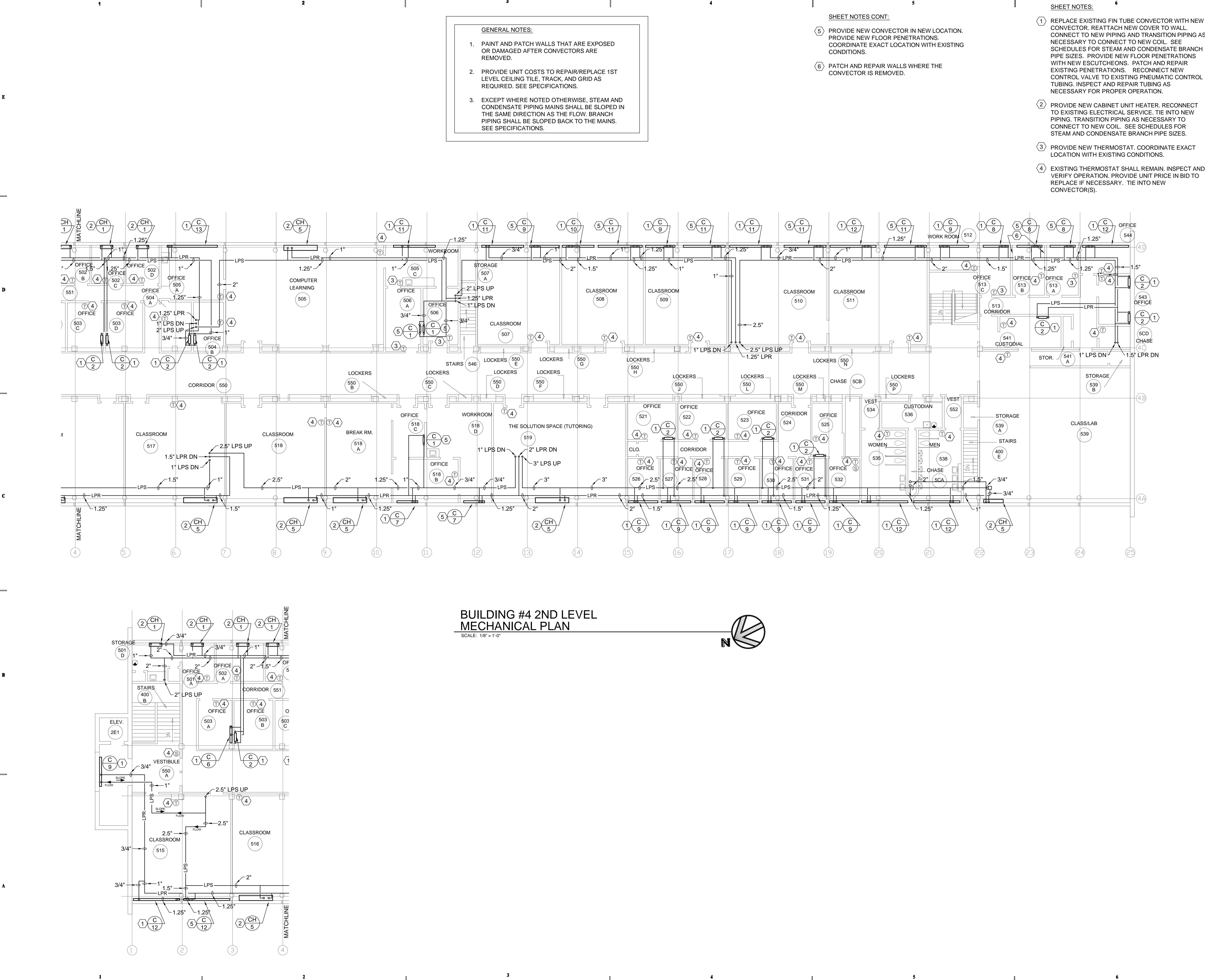
SHEET TITLE

**BUILDING # 4  
CRAWL SPACE AND  
TUNNEL MECHANICAL  
PLAN**

SHEET NO.

**ME101**





- GENERAL NOTES:
1. PAINT AND PATCH WALLS THAT ARE EXPOSED OR DAMAGED AFTER CONVECTORS ARE REMOVED.
  2. PROVIDE UNIT COSTS TO REPAIR/REPLACE 1ST LEVEL CEILING TILE, TRACK, AND GRID AS REQUIRED. SEE SPECIFICATIONS.
  3. EXCEPT WHERE NOTED OTHERWISE, STEAM AND CONDENSATE PIPING MAINS SHALL BE SLOPED IN THE SAME DIRECTION AS THE FLOW. BRANCH PIPING SHALL BE SLOPED BACK TO THE MAINS. SEE SPECIFICATIONS.

SHEET NOTES CONT:

5. PROVIDE NEW CONVECTOR IN NEW LOCATION. PROVIDE NEW FLOOR PENETRATIONS. COORDINATE EXACT LOCATION WITH EXISTING CONDITIONS.
6. PATCH AND REPAIR WALLS WHERE THE CONVECTOR IS REMOVED.

SHEET NOTES:

1. REPLACE EXISTING FIN TUBE CONVECTOR WITH NEW CONVECTOR. REATTACH NEW COVER TO WALL. CONNECT TO NEW PIPING AND TRANSITION PIPING AS NECESSARY TO CONNECT TO NEW COIL. SEE SCHEDULES FOR STEAM AND CONDENSATE BRANCH PIPE SIZES. PROVIDE NEW FLOOR PENETRATIONS WITH NEW ESCUTCHEONS. PATCH AND REPAIR EXISTING PENETRATIONS. RECONNECT NEW CONTROL VALVE TO EXISTING PNEUMATIC CONTROL TUBING. INSPECT AND REPAIR TUBING AS NECESSARY FOR PROPER OPERATION.
2. PROVIDE NEW CABINET UNIT HEATER. RECONNECT TO EXISTING ELECTRICAL SERVICE. TIE INTO NEW PIPING. TRANSITION PIPING AS NECESSARY TO CONNECT TO NEW COIL. SEE SCHEDULES FOR STEAM AND CONDENSATE BRANCH PIPE SIZES.
3. PROVIDE NEW THERMOSTAT. COORDINATE EXACT LOCATION WITH EXISTING CONDITIONS.
4. EXISTING THERMOSTAT SHALL REMAIN. INSPECT AND VERIFY OPERATION. PROVIDE UNIT PRICE IN BID TO REPLACE IF NECESSARY. TIE INTO NEW CONVECTOR(S).

State of Utah  
Department of Administrative Services

DFCM

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PROJECT NAME & ADDRESS

**WSU BUILDINGS  
# 4 STEAM,  
CONDENSATE,  
DOMESTIC WATER  
REPLACEMENT**  
**DFCM No. 06052810**  
  
OGDEN, UTAH

MARK	DATE	REVISION
CD	4/17	

PROJECT MANAGER:  
VP

DRAWN BY:  
STAFF

CHECKED BY:  
SLW

DATE:  
04/17/06

WHW JOB NO.:  
06004

SHEET TITLE

**BUILDING # 4  
2ND LEVEL  
MECHANICAL PLAN**

**ME103**

E

D

C

B

A

Division of Facilities  
Construction & Management  
4110 State Office Building  
Salt Lake City, Utah 84114  
Phone: (801) 538 - 3018  
Fax: (801) 538 - 3267

Internet: <http://www.dfcv.state.ut.us>

CONSULTANTS

**WHW**  
**ENGINEERING INC.**  
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1554 East 1200 South, Suite 200  
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CHECKED BY:	SLW
DATE:	04/17/06
WHW JOB NO.:	06004

SHEET TITLE  
**BUILDING # 4  
2ND LEVEL MECHANICAL  
DETAILS AND SCHEDULES**

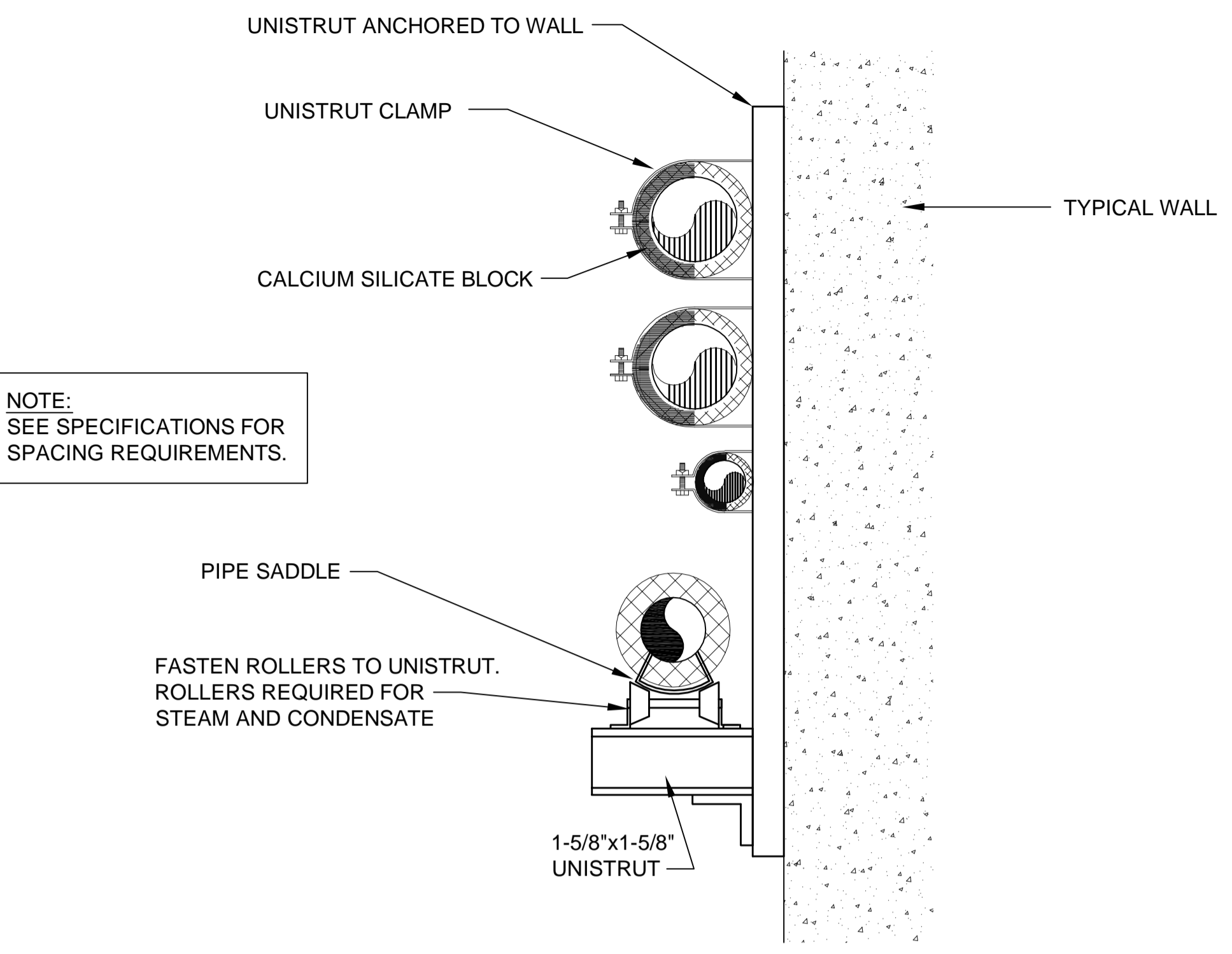
SHEET NO.  
**ME501**

FINTUBE CONVECTOR SCHEDULE							
SYMBOL	MBTU	STEAM LBS/HR	STEAM PIPING BRANCHES		SIZE LxWxH	MAKE AND MODEL	COMMENTS
			SUPPLY	RETURN			
(C 1)	3.2	3.5	1/2"	1/2"	20x4x20	AIRTHERM SW-A	(1) (2)
(C 2)	3.6	3.75	1/2"	1/2"	24x4x24	AIRTHERM SW-A	(1) (2)
(C 3)	9.9	10.25	3/4"	1/2"	32x4x26	AIRTHERM SW-A	(1) (2)
(C 4)	11.3	11.75	3/4"	1/2"	36x4x26	AIRTHERM SW-A	(1) (2)
(C 5)	14.2	14.75	3/4"	1/2"	44x4x26	AIRTHERM SW-A	(1) (2)
(C 6)	15.5	16.25	3/4"	1/2"	48x6x26	AIRTHERM SW-A	(1) (2)
(C 7)	19.8	20.75	1"	3/4"	60x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 8)	22.5	23.5	1"	3/4"	72x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 9)	26.8	28	1"	3/4"	84x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 10)	31	32.25	1-1/4"	3/4"	96x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 11)	39.6	41.25	1-1/4"	3/4"	120x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 12)	49.3	51.5	1-1/4"	1"	132x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 13)	53.6	56	1-1/4"	1"	144x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 14)	59.4	62	1-1/2"	1"	180x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 15)	62	65	1-1/2"	1"	192x4x26	AIRTHERM SW-A	(1) (2) (3)
(C 16)	69	72	1-1/2"	1"	228x4x26	AIRTHERM SW-A	(1) (2) (3)

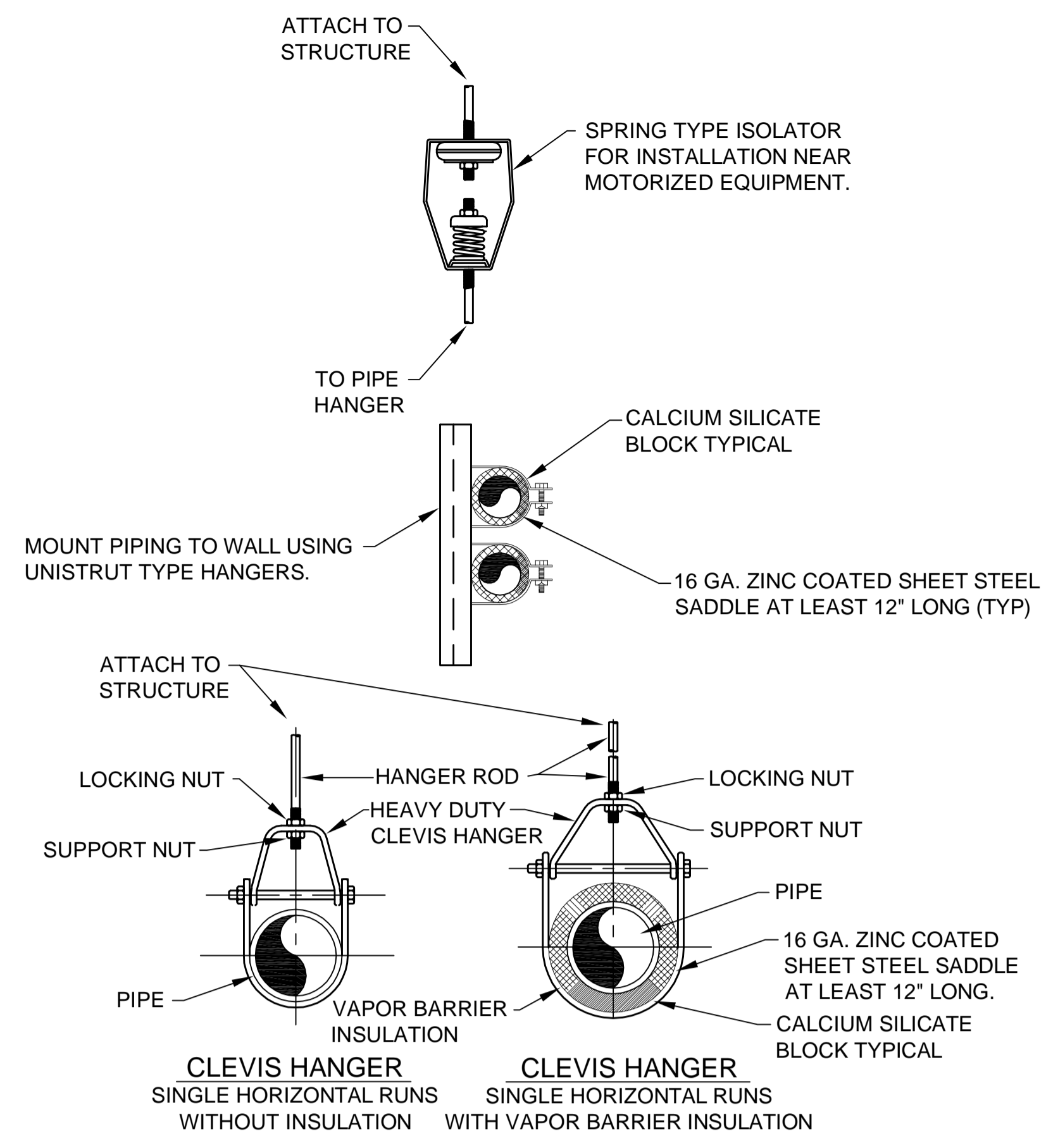
- (1) SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.  
(2) PROVIDE BAKED ENAMEL FINISH WITH COLOR BY OWNER.  
(3) PROVIDE TWINNING KIT FOR UNITS LONGER THAN MANUFACTURER'S STANDARD SIZES. SEE DETAIL.

CABINET UNIT HEATER SCHEDULE							
SYMBOL	CFM	MOTOR HP	HEATING CAPACITY		STEAM PIPING BRANCHES		UNIT SIZE
			MBH	STEAM LBS/HR			
(CH 1)	230	1/10	22.6	23.4	3/4"	3/4"	02
(CH 2)	335	1/10	31.4	32.5	1"	3/4"	03
(CH 3)	430	1/10	41.0	42.4	1"	3/4"	04
(CH 4)	630	1/10	66.1	68.4	1-1/4"	1"	06
(CH 5)	1410	1/10 (3)	108.2	112	1-1/2"	1"	14

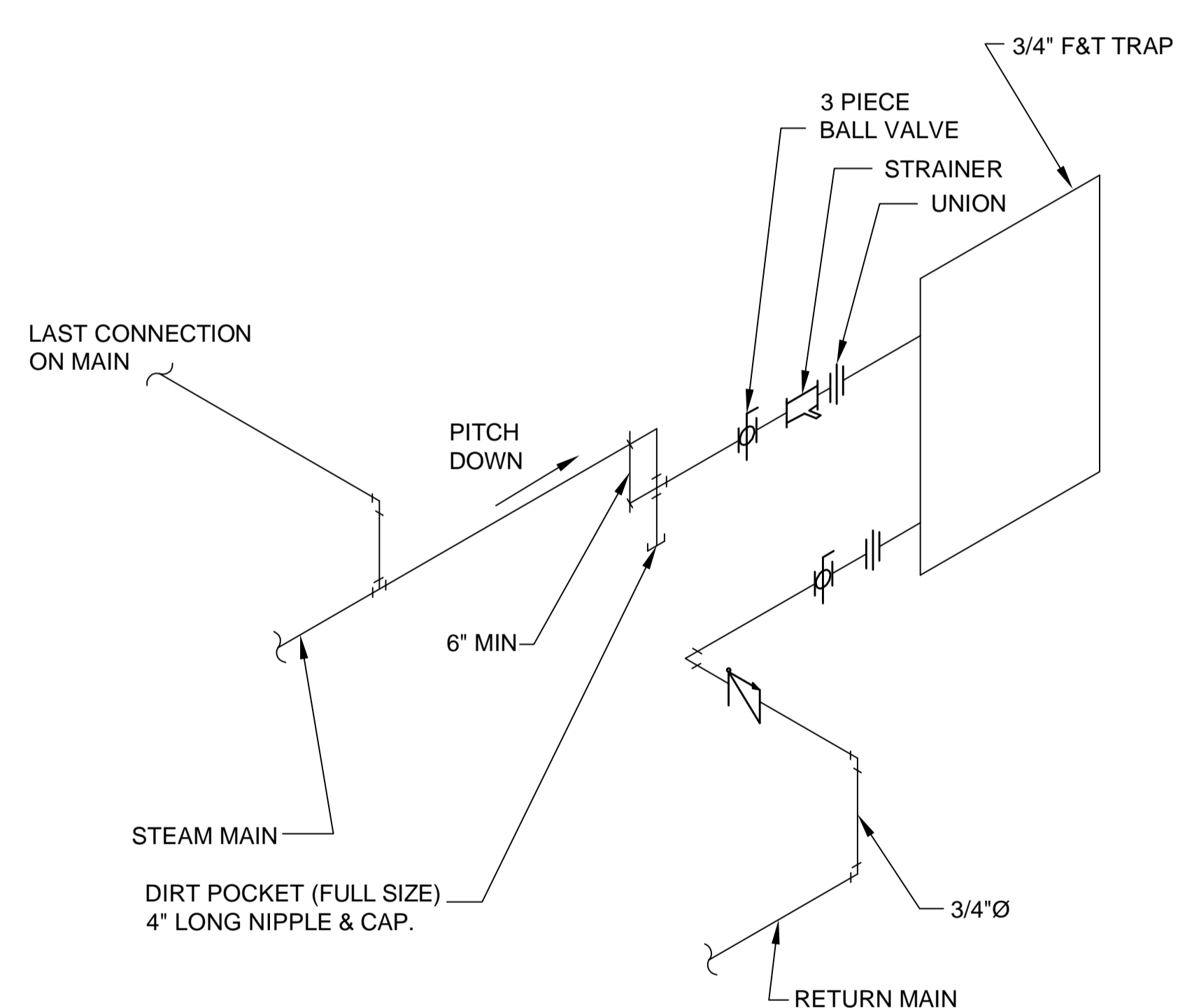
- (1) THREE SPEED MOTOR.  
(2) RE-CONNECT TO EXISTING 120/1/60 ELECTRICAL SERVICE.  
(3) TWO MOTORS.  
(4) PROVIDE WITH BAKED ENAMEL, FINISH WITH COLOR BY OWNER.  
(5) SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.



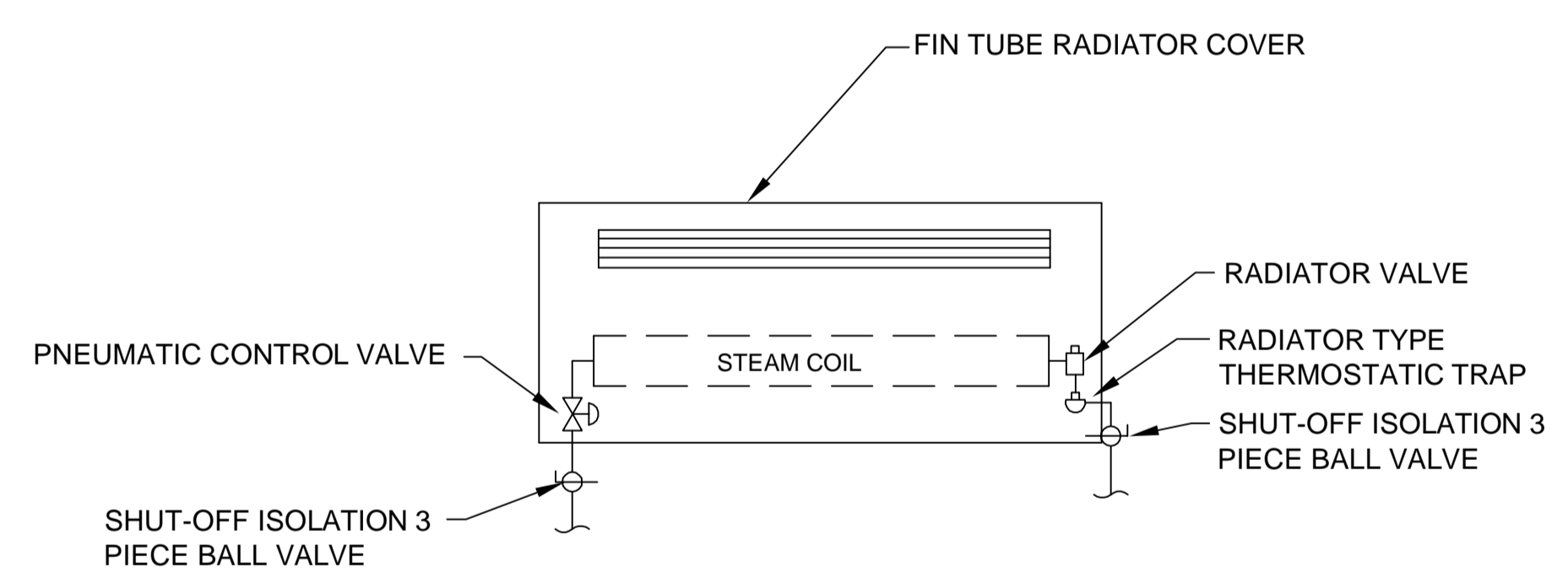
**D1 PIPE WALL SUPPORT DETAIL**  
SCALE: NONE



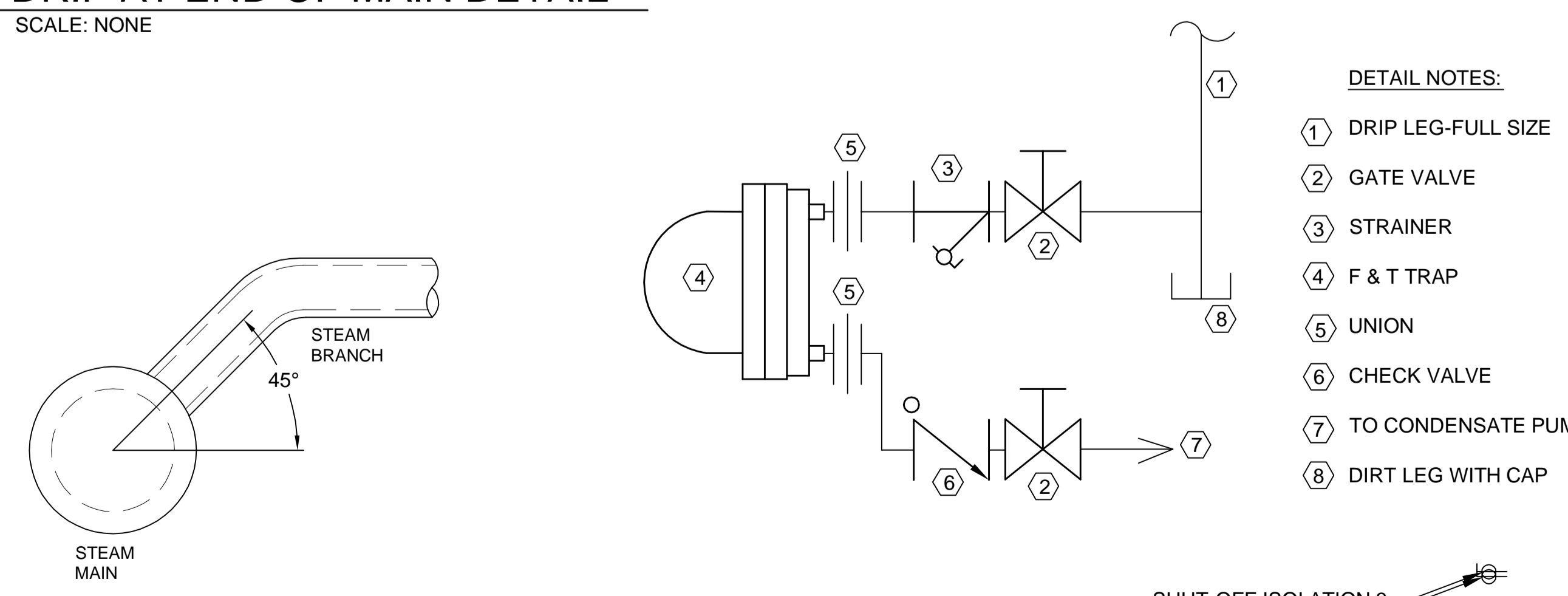
**D3 PIPE HANGER DETAIL**  
SCALE: NONE



**B1 DRIP AT END OF MAIN DETAIL**  
SCALE: NONE

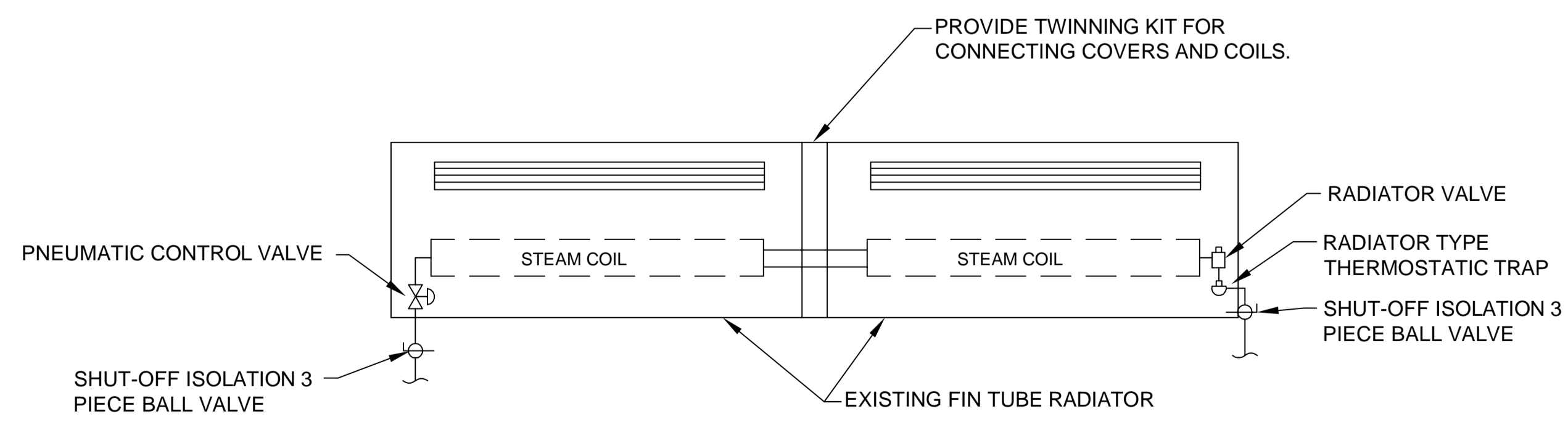


**B3 STANDARD STEAM CONVECTOR DETAIL**  
SCALE: NONE



**A1 STEAM PIPING TAKE-OFF DETAIL**  
SCALE: NONE

**A2 F&T TRAP DETAIL**  
SCALE: NONE



**A4 STEAM CONVECTOR WITH TWINNING KIT DETAIL**  
SCALE: NONE

1

2

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4

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6

E

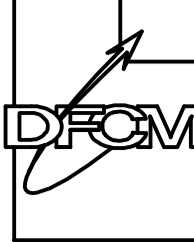
D

C

B

A


State of Utah  
Department of Administrative Services



Division of Facilities  
Construction & Management  
4110 State Office Building  
Salt Lake City, Utah 84114  
Phone: (801) 538 - 3018  
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CONSULTANTS



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**DFCM No. 06052810**

OGDEN, UTAH

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WP

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CHECKED BY:  
SLW

DATE:  
04/17/06

WHW JOB NO.:  
06004

SHEET TITLE

PLUMBING GENERAL  
NOTES AND LEGENDS

SHEET NO.

P001

- SHEET NOTES:
- 1

EXISTING CULINARY COLD, HOT AND HOT WATER RECIRCULATING PIPING SHALL REMAIN.
- 2

REMOVE EXISTING PIPING RISERS TO SECOND FLOOR BACK TO THIS POINT. CAP AND PROTECT FOR FUTURE RE-CONNECTION. FIELD VERIFY EXACT SIZE AND LOCATION.
- 3

EXISTING WASTE, VACUUM, DE-IONIZED WATER, AND ALL OTHER PIPING NOT SHOWN SHALL REMAIN.
- 4

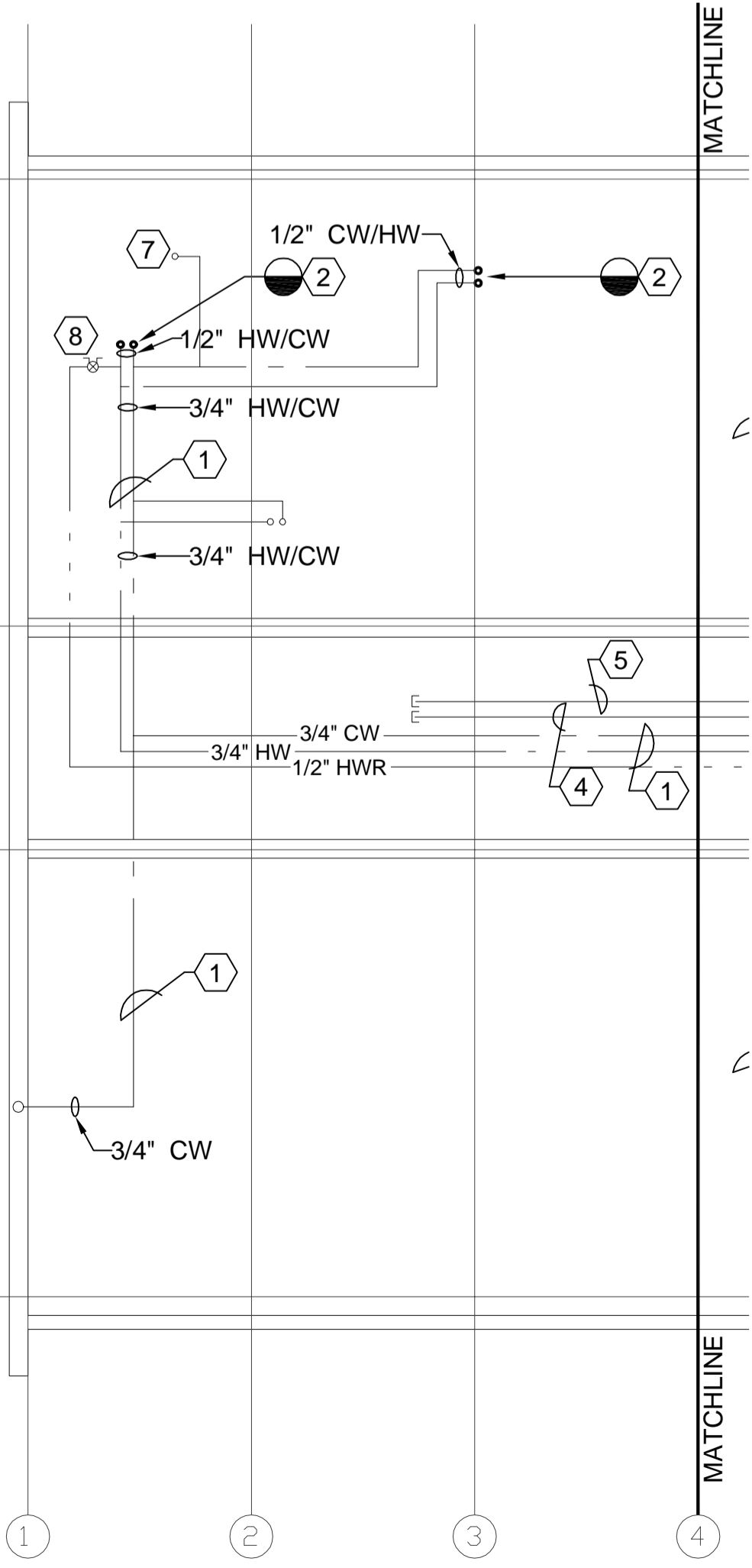
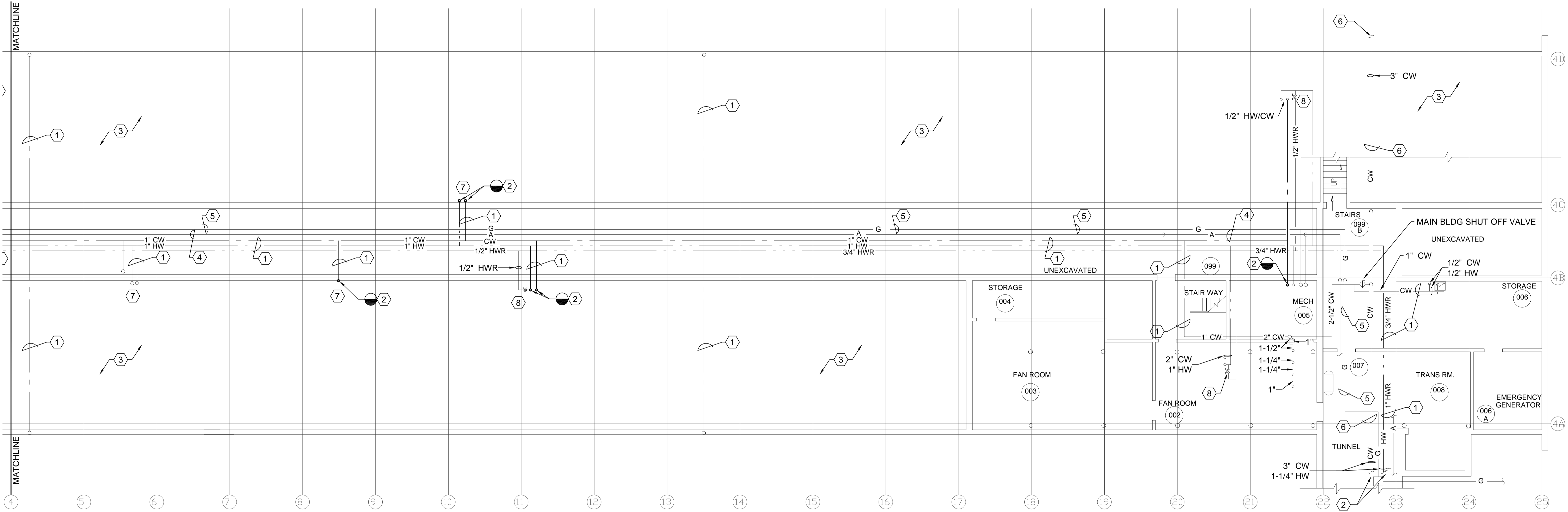
EXISTING AIR PIPING SHALL REMAIN.
- 5

EXISTING GAS PIPING MAIN SHALL REMAIN.
- 6

EXISTING CULINARY WATER MAIN SHALL REMAIN.
- 7

EXISTING PIPE RISERS TO ABOVE. SEE SHEET PD102 FOR CONTINUATION.
- 8

EXISTING HOT WATER CIRCUIT SETTER SHALL REMAIN.



BUILDING #4 CRAWL SPACE  
PLUMBING DEMO. PLAN

SCALE: 1/8" = 1'-0"



NOTES:

FIELD VERIFY ALL EXISTING PIPING AND OTHER FIELD CONDITIONS. PROTECT AIR, GAS, DE-IONIZED WATER, WASTE PIPING THAT SHALL REMAIN.

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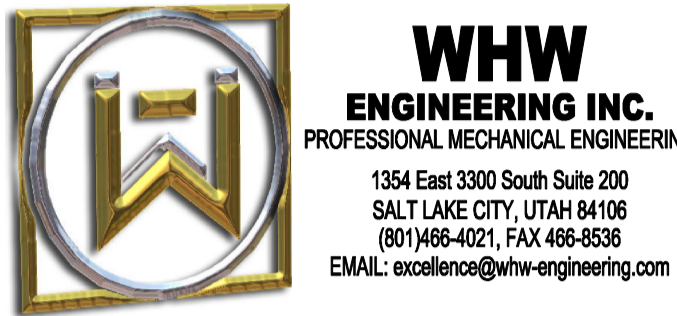
SHEET TITLE

BUILDING # 4  
CRAWL SPACE AND TUNNEL  
PLUMBING DEMO.  
PLAN

SHEET NO.

PD101

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SHEET TITLE

**BUILDING # 4  
MAIN LEVEL  
PLUMBING DEMO.  
PLAN**

SHEET NO.

**PD102**

SHEET NOTES:

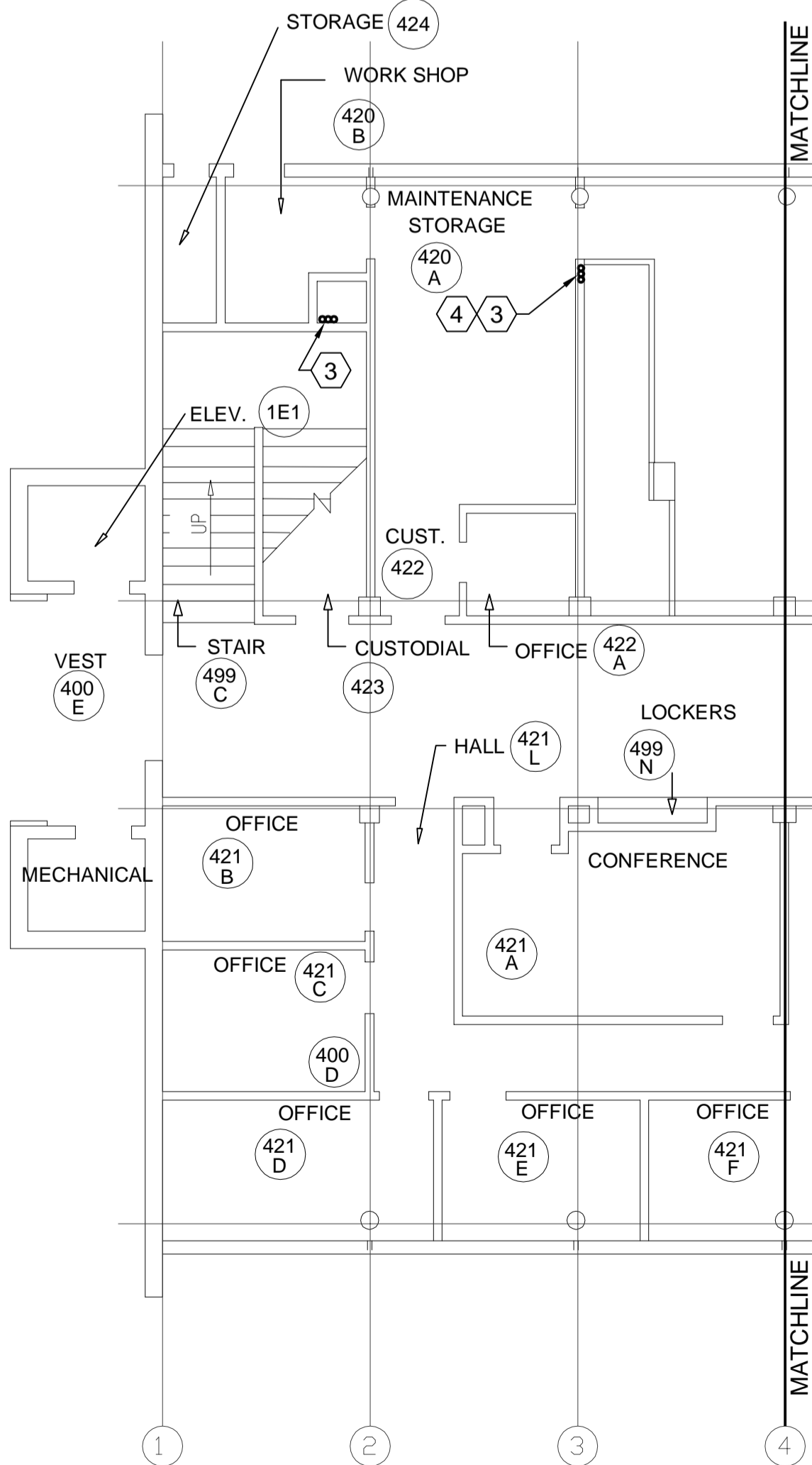
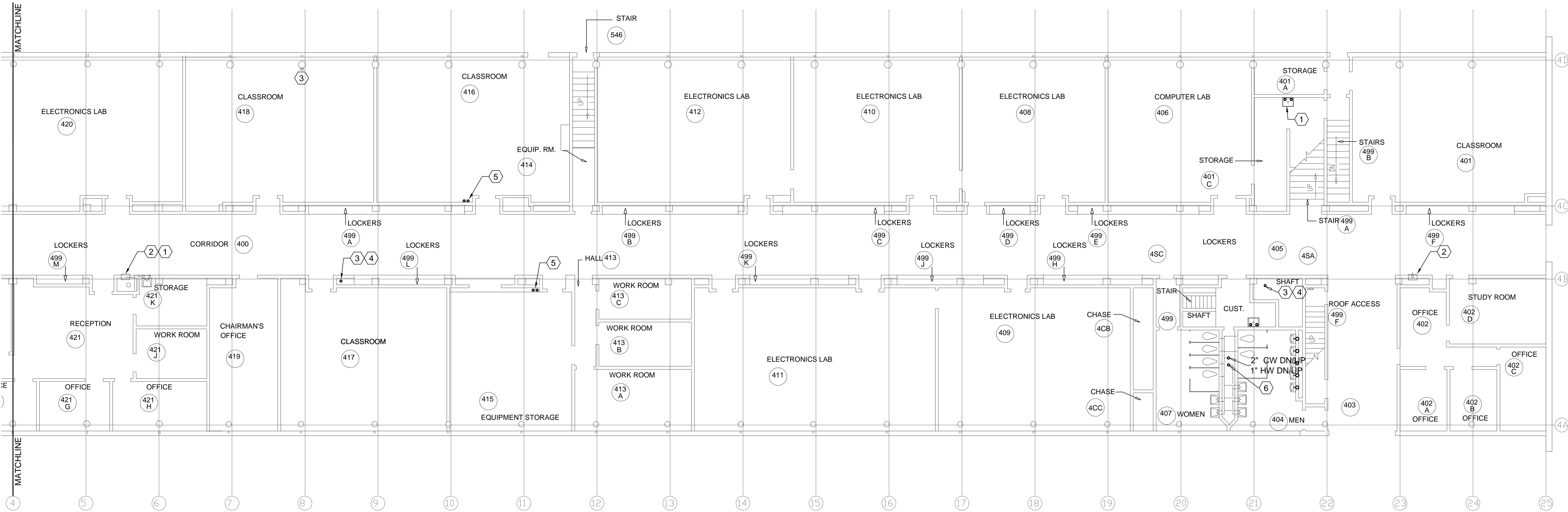
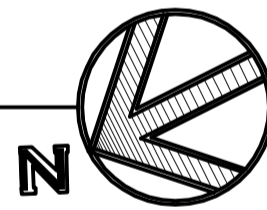
- EXISTING CULINARY HOT AND COLD WATER LINES SERVING EXISTING LAVATORY OR FIXTURE. SHALL REMAIN.
- EXISTING DRINKING FOUNTAIN SHALL REMAIN.
- REMOVE EXISTING PIPE RISERS TO FLOOR ABOVE. SEE SHEET PD101 AND PD103 FOR CONTINUATION.
- CUT AND PATCH EXISTING WALLS AS NECESSARY TO ACCESS PIPING.
- REMOVE EXISTING CULINARY, CW AND HW PIPING TO FIXTURE ABOVE. EXISTING EXPOSED GLASS WASTE PIPING SHALL REMAIN.

NOTES:

FIELD VERIFY ALL EXISTING PIPING AND OTHER FIELD CONDITIONS. PROTECT AIR, GAS, DE-IONIZED WATER, WASTE PIPING THAT SHALL REMAIN.

**BUILDING #4 MAIN LEVEL  
PLUMBING DEMOLITION PLAN**

SCALE: 1/8" = 1'-0"



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SHEET TITLE

**BUILDING # 4  
2ND LEVEL  
PLUMBING DEMO.  
PLAN**

SHEET NO.

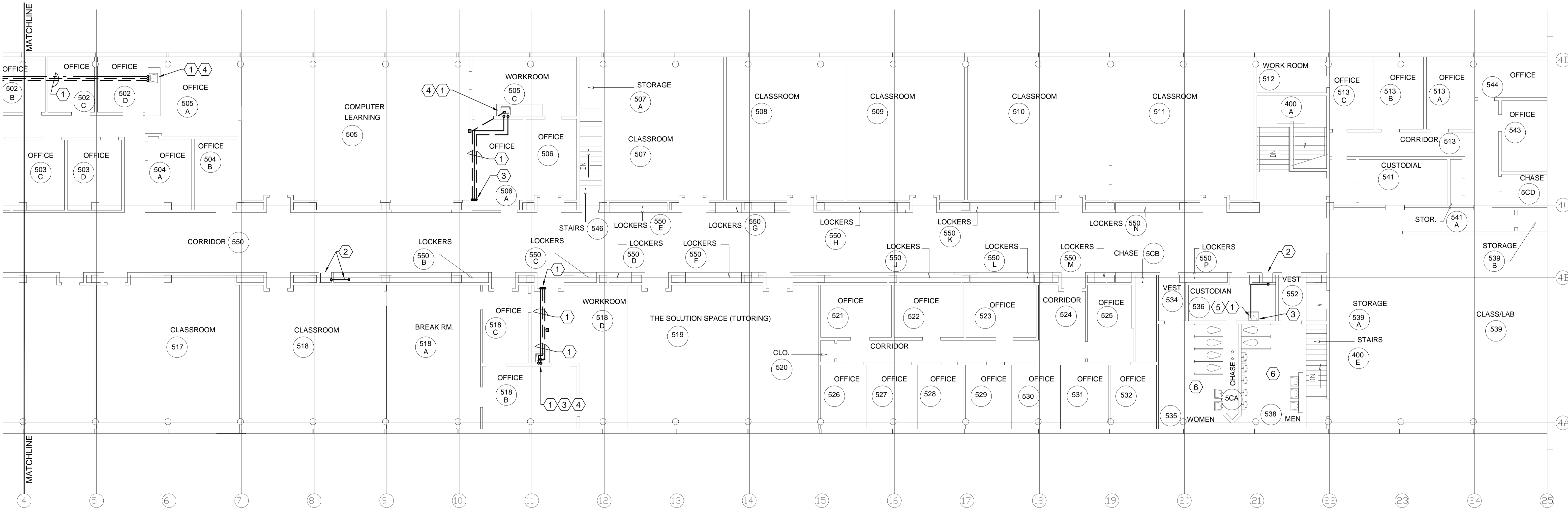
**PD103**

SHEET NOTES:

- 1 REMOVE EXISTING CULINARY HOT AND COLD WATER LINES SERVING EXISTING LAVATORY OR FIXTURE. ALL WASTE PIPING SHALL REMAIN. PIPING LOCATED IN CEILING SPACE BELOW. SEE SHEET PE104.
- 2 REMOVE EXISTING DRINKING FOUNTAIN, AND CULINARY CW PIPING.
- 3 REMOVE EXISTING PIPE RISERS FROM BELOW. SEE SHEET PD102 FOR CONTINUATION.
- 4 REMOVE EXISTING PIPING IN CABINET UNDER SINK.
- 5 REMOVE EXISTING PIPING AND INSULATION EXPOSED IN THIS AREA.
- 6 EXISTING COPPER PIPING IN CHASE AND RESTROOMS SHALL REMAIN.

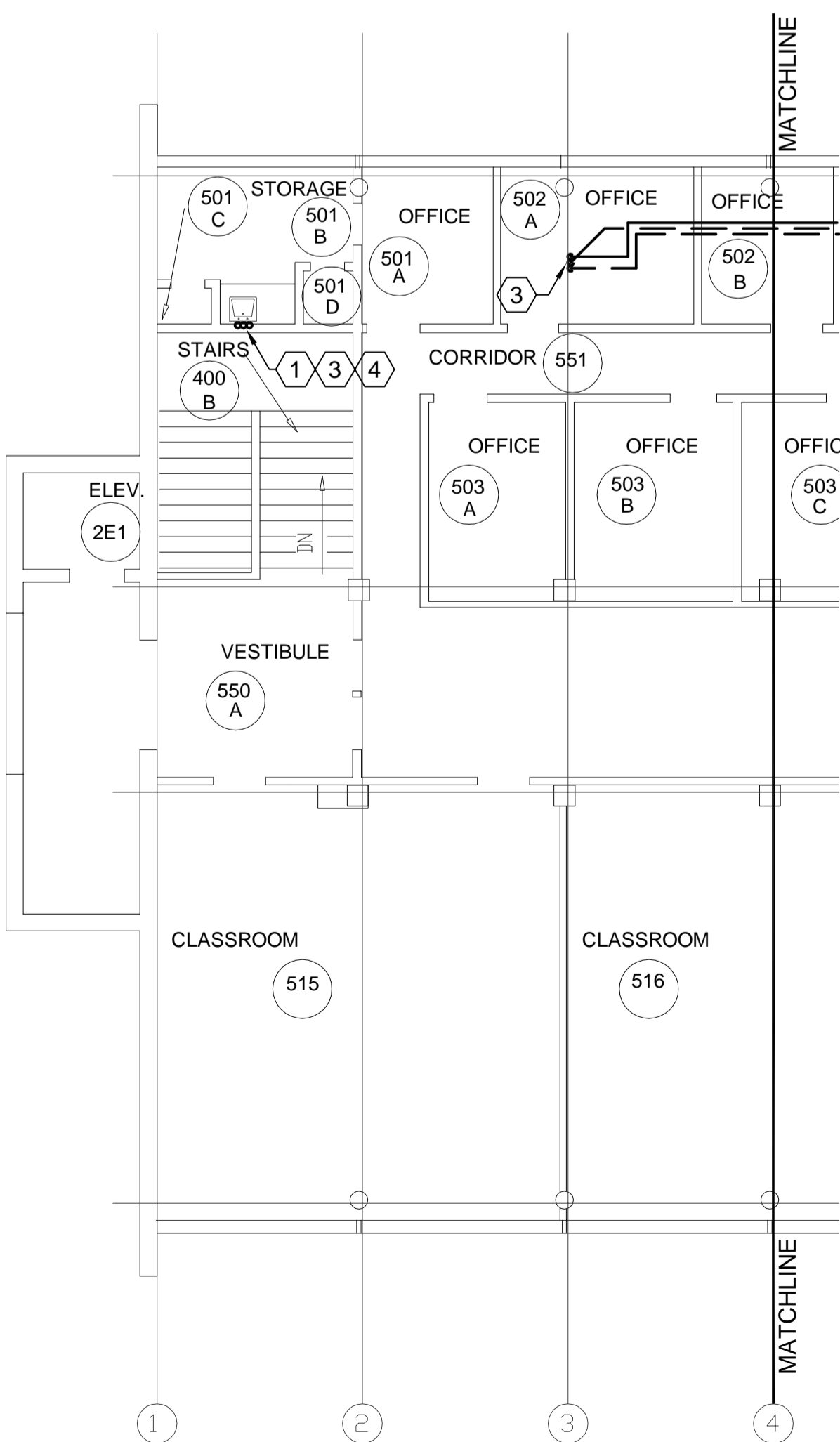
NOTES:

FIELD VERIFY ALL EXISTING PIPING AND OTHER FIELD CONDITIONS. PROTECT AIR, GAS, DE-IONIZED WATER, WASTE PIPING THAT SHALL REMAIN.



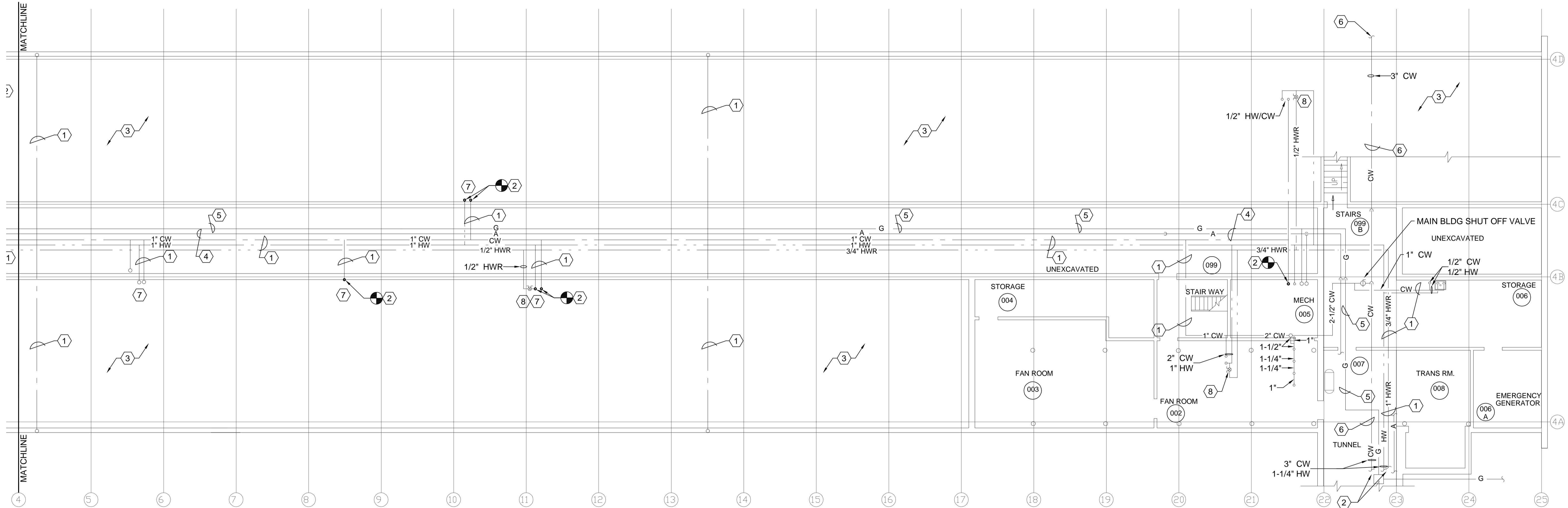
**BUILDING #4 2ND LEVEL  
PLUMBING DEMOLITION PLAN**

SCALE: 1/8" = 1'-0"



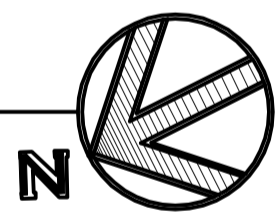
SHEET NOTES:

- EXISTING CULINARY COLD, HOT AND HOT WATER RECIRCULATING PIPING SHALL REMAIN.
- PROVIDE NEW PIPING RISERS TO SECOND FLOOR AT THIS POINT. FIELD VERIFY EXACT SIZE AND LOCATION.
- EXISTING WASTE, VACUUM, DE-IONIZED WATER, AND ALL OTHER PIPING NOT SHOWN SHALL REMAIN.
- EXISTING AIR PIPING SHALL REMAIN.
- EXISTING GAS PIPING MAIN SHALL REMAIN.
- EXISTING CULINARY WATER MAIN SHALL REMAIN.
- EXISTING PIPE RISERS TO ABOVE. SEE SHEET PE102 FOR CONTINUATION.
- EXISTING HOT WATER CIRCUIT SETTER SHALL REMAIN.



BUILDING #4 CRAWL SPACE  
AND TUNNEL PLUMBING PLAN

SCALE: 1/8" = 1'-0"



NOTES:

FIELD VERIFY ALL EXISTING PIPING AND OTHER FIELD CONDITIONS. PROTECT AIR, GAS, DE-IONIZED WATER, WASTE PIPING THAT SHALL REMAIN.

**WSU BUILDINGS  
# 4 STEAM,  
CONDENSATE,  
DOMESTIC WATER  
REPLACEMENT**  
**DFCM No. 06052810**

OGDEN, UTAH

MARK	DATE	REVISION
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CD	4/17	
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PROJECT MANAGER:

WP

DRAWN BY:

STAFF

CHECKED BY:

SLW

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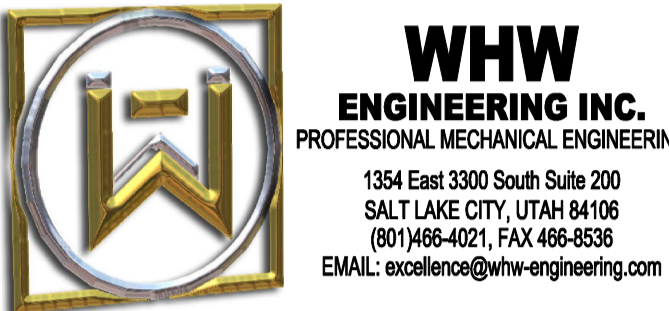
SHEET TITLE

**BUILDING # 4  
CRAWL SPACE AND TUNNEL  
PLUMBING PLAN**

SHEET NO.

**PE101**

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SHEET TITLE

**BUILDING # 4  
MAIN LEVEL  
PLUMBING  
PLAN**

SHEET NO.

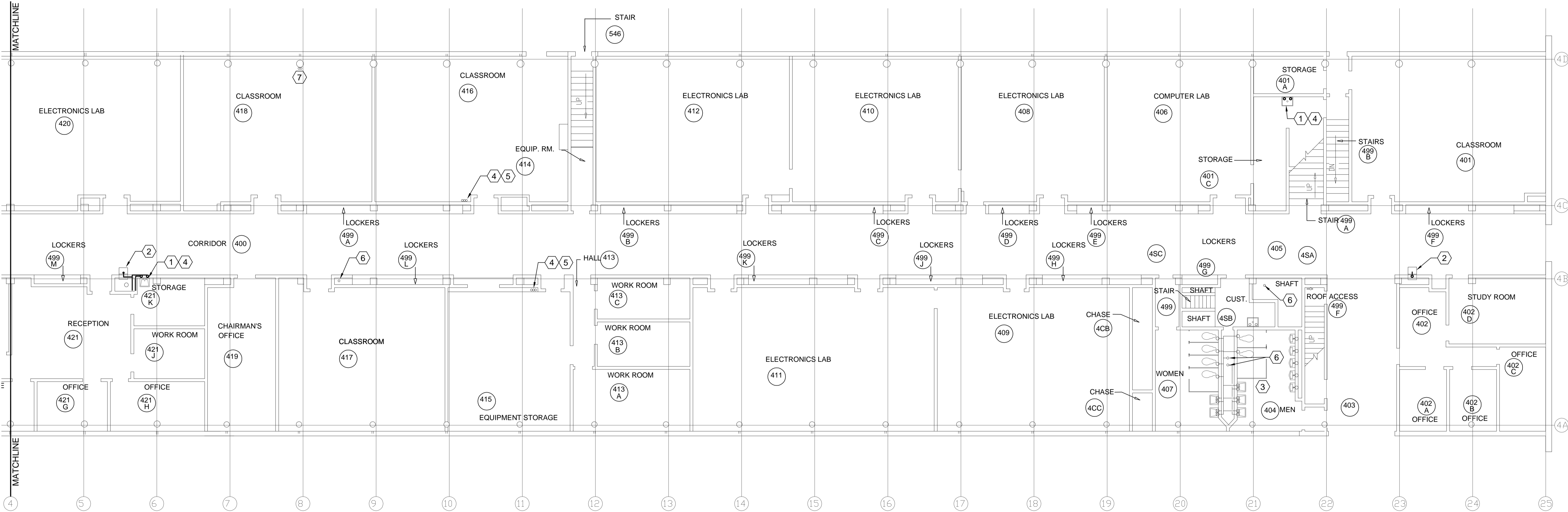
**PE102**

SHEET NOTES CONT.:

- EXISTING PIPING SHALL BE ABANDONED IN PLACE.
- EXISTING PIPING IN CABINET UNDER SINK SHALL REMAIN.
- PIPING AND INSULATION ARE EXPOSED IN THIS AREA.
- ROUTE NEW PIPING CONCEALED IN EXISTING CHASE, OR EXPOSED IN STAIRWELL.
- RE-CONNECT TO EXISTING PIPING. FIELD VERIFY EXACT SIZES AND LOCATION.

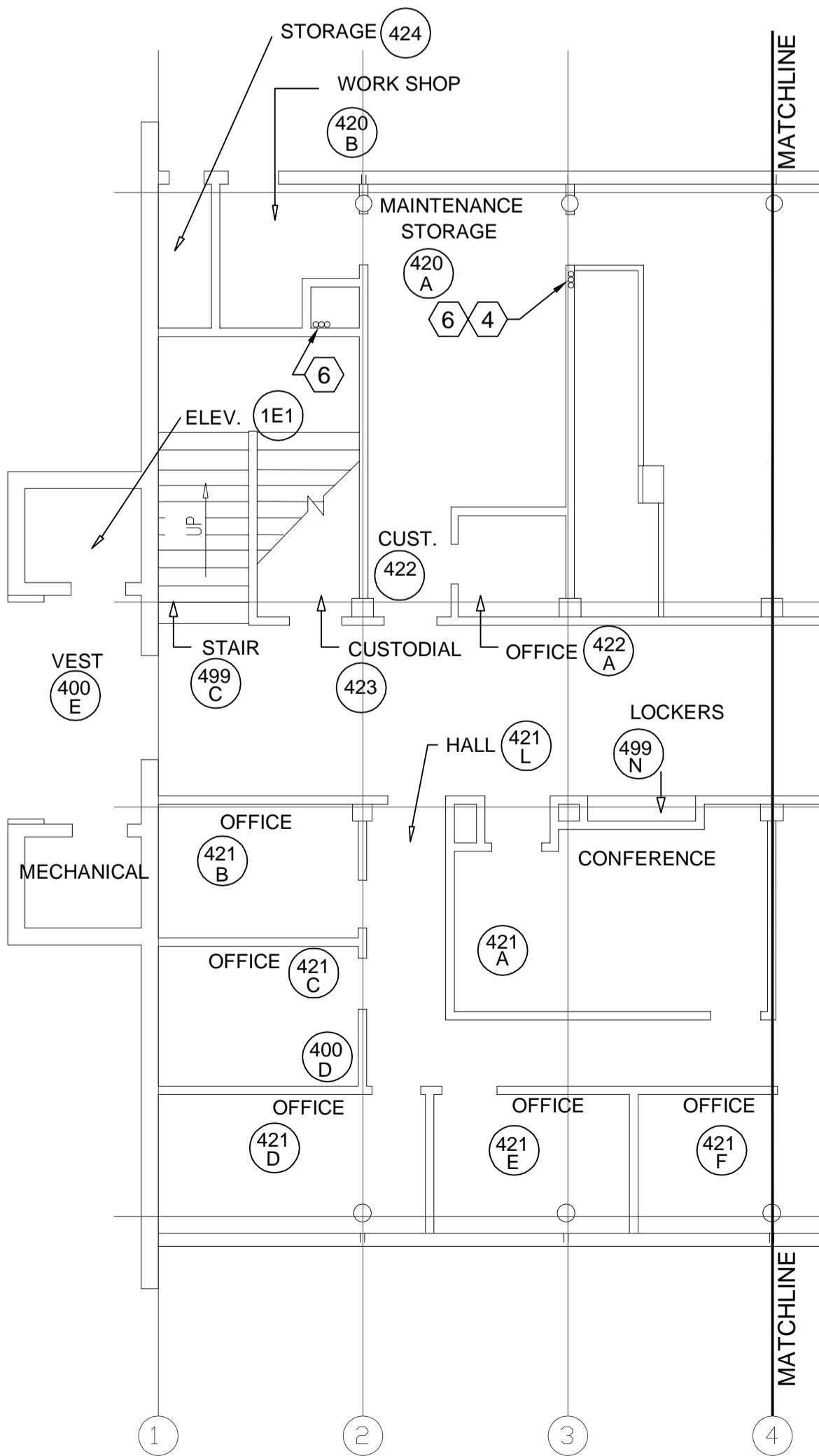
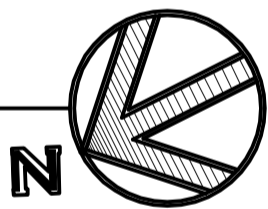
SHEET NOTES:

- EXISTING CULINARY HOT AND COLD WATER LINES SERVING EXISTING LAVATORY OR FIXTURE. SHALL REMAIN.
- EXISTING DRINKING FOUNTAIN SHALL REMAIN.
- EXISTING RESTROOM PIPING SHALL REMAIN.
- PIPING AND INSULATION ARE EXPOSED IN THIS AREA.
- PROVIDE NEW CULINARY, CW AND HW PIPING TO FIXTURE ABOVE. EXISTING EXPOSED GLASS WASTE PIPING SHALL REMAIN.
- EXISTING PIPE RISERS TO FLOOR ABOVE. SEE SHEET PE101 AND PE103 FOR CONTINUATION.

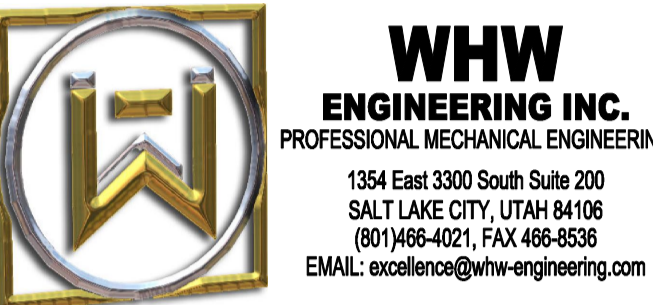


**BUILDING #4 MAIN LEVEL  
PLUMBING PLAN**

SCALE: 1/8" = 1'-0"



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SLW

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06004

SHEET TITLE

**BUILDING # 4  
2ND LEVEL  
PLUMBING  
PLAN**

SHEET NO.

**PE103**

SHEET NOTES:

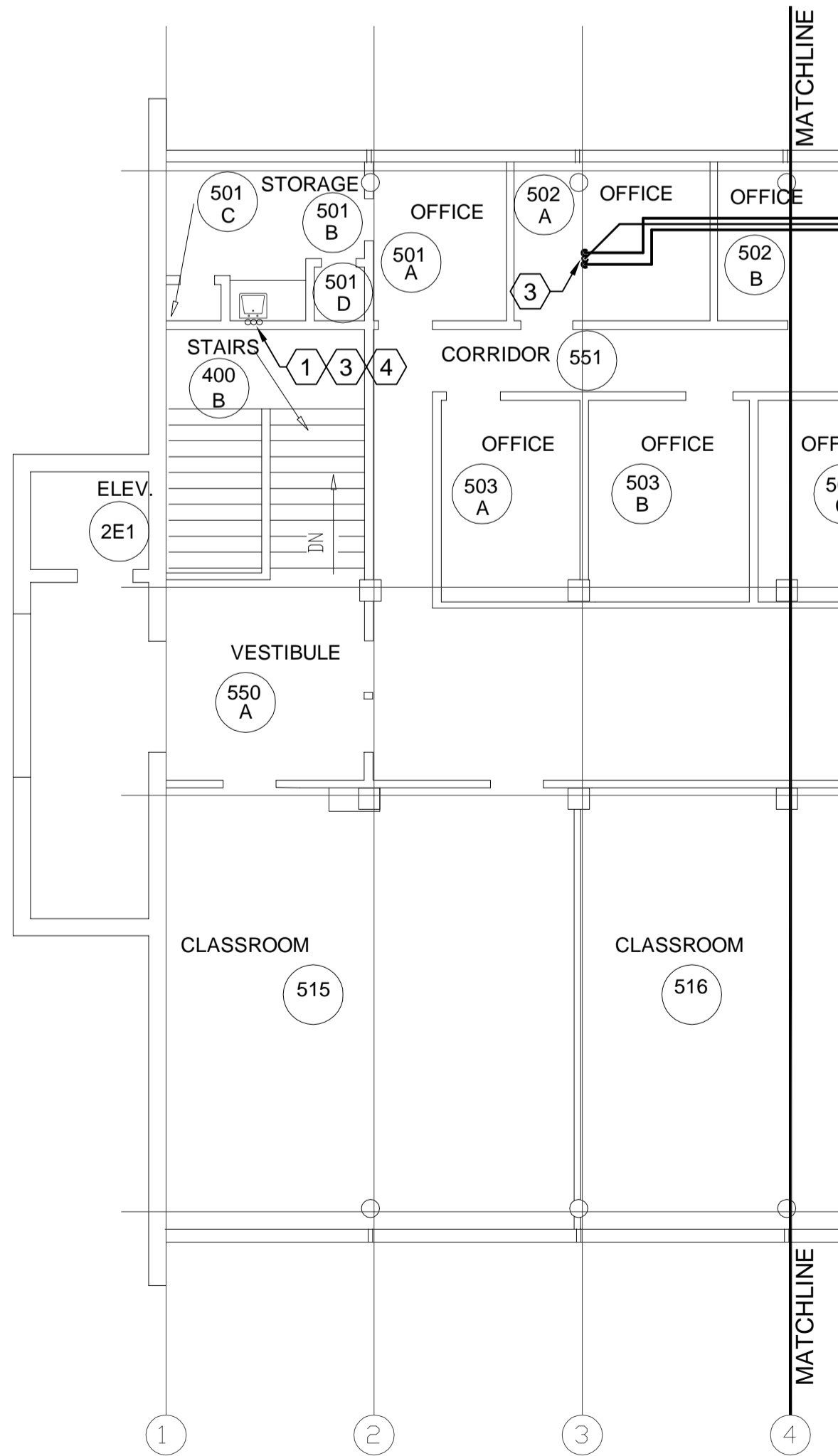
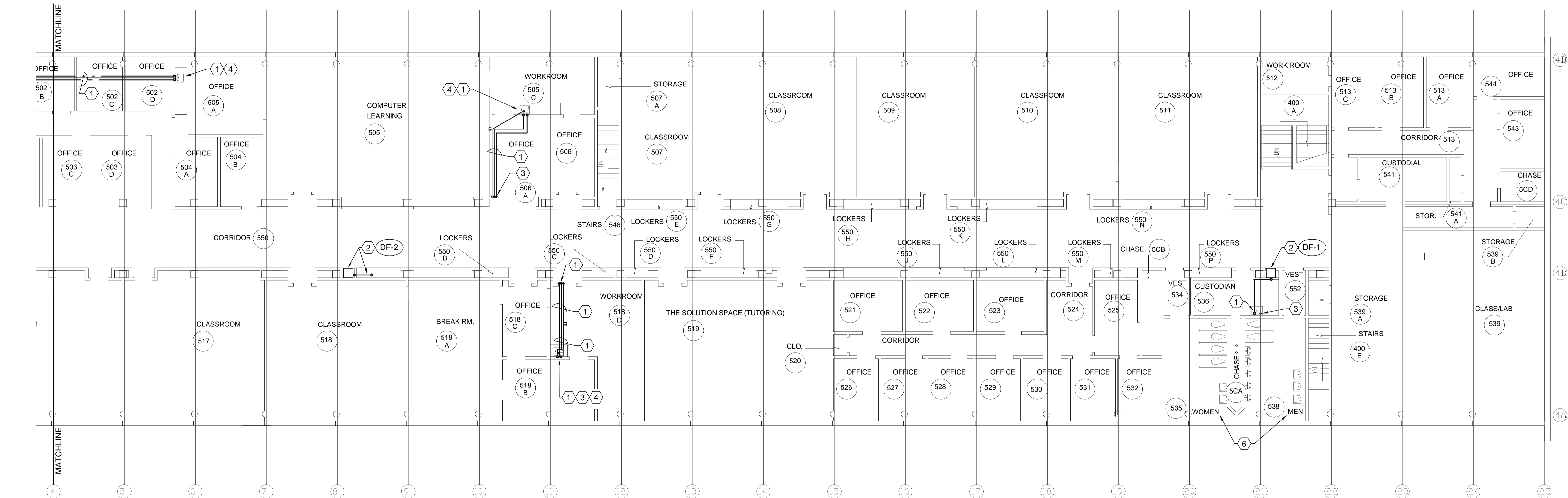
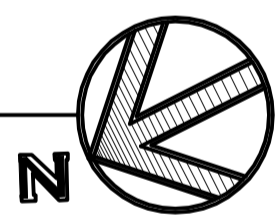
- 1 PROVIDE NEW CULINARY HOT AND COLD WATER LINES SERVING EXISTING LAVATORY OR FIXTURE. ALL WASTE PIPING SHALL REMAIN. PIPING LOCATED IN CEILING SPACE BELOW. SEE SHEET PE102.
- 2 PROVIDE NEW DRINKING FOUNTAIN, AND CULINARY CW PIPING. PROVIDE 24x36 SS BACK SPLASH.
- 3 PROVIDE NEW PIPE RISERS FROM BELOW. SEE SHEET PE102 FOR CONTINUATION.
- 4 PROVIDE NEW PIPING IN CABINET UNDER SINK.
- 5 PROVIDE NEW PIPING AND INSULATION EXPOSED IN THIS AREA.
- 6 EXISTING PIPING IN RESTROOMS SHALL REMAIN.

NOTES:

FIELD VERIFY ALL EXISTING PIPING AND OTHER FIELD CONDITIONS. PROTECT AIR, GAS, DE-IONIZED WATER, WASTE PIPING THAT SHALL REMAIN.

**BUILDING #4 2ND LEVEL  
PLUMBING PLAN**

SCALE: 1/8" = 1'-0"



1

2

3

4

5

6

E

D

C

B

A

PLUMBING FIXTURE SCHEDULE							
SYMBOL	FIXTURE	INDIVIDUAL LINE SIZES					REMARKS
		TRAP	WASTE	VENT	C.W.	H.W.	
DF-1	DRINKING FOUNTAIN	1-1/2"	1-1/2"	1-1/2"	1/2"	-	ELECTRIC WATER COOLER
DF-2	DRINKING FOUNTAIN	1-1/2"	1-1/2"	1-1/2"	1/2"	-	ELECTRIC WATER COOLER (ADA COMPLIANT)

\*PROVIDE WITH 24"x36" STAINLESS STEEL BACK SPLASH

C5 PIPE HANGER DETAIL  
SCALE: NONE

State of Utah  
Department of Administrative Services

DFCM

Division of Facilities  
Construction & Management  
4110 State Office Building  
Salt Lake City, Utah 84114  
Phone: (801) 538 - 3018  
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PROJECT NAME & ADDRESS

**WSU BUILDINGS  
# 4 STEAM,  
CONDENSATE,  
DOMESTIC WATER  
REPLACEMENT**  
**DFCM No. 06052810**  
  
OGDEN, UTAH

MARK	DATE	REVISION
CD	4/17	

PROJECT MANAGER:  
WP  
DRAWN BY:  
STAFF  
CHECKED BY:  
SLW  
DATE:  
04/17/06  
WHW JOB NO.:  
06004

SHEET TITLE

**BUILDING # 4  
2ND LEVEL PLUMBING  
DETAILS AND SCHEDULES**

SHEET NO.

**PE501**